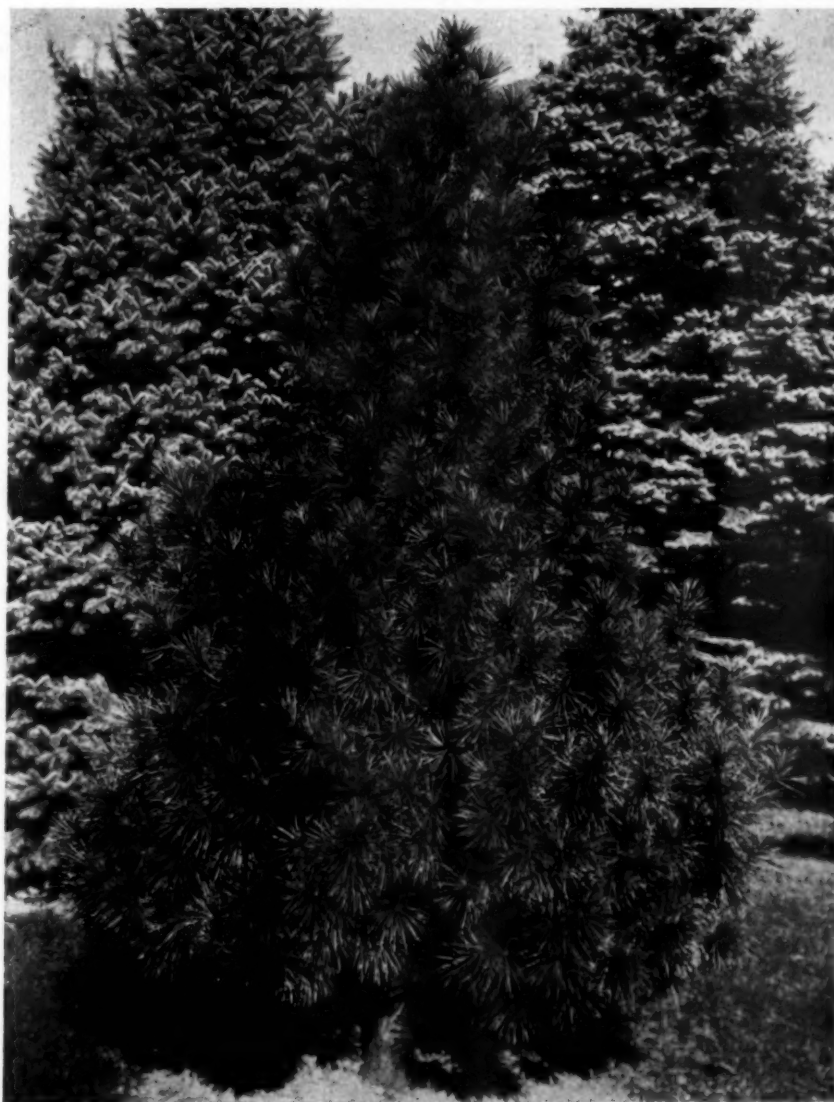


AMERICAN NURSERYMAN

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The Nurseryman's Forte: To Make America More Beautiful and Fruitful

NOVEMBER 1, 1943



Sciadopitys Verticillata

Germinating Nandina Domestica Seeds
Current Evaluation of Small Fruits
Experiences in Wartime Year
Use of Poultry Manure

Editorial

THE WAY OF BUSINESS.

In these days of military discipline, priorities, food rationing, price control, production management, inventory regulations and a host of other regimentations of civilian life, skeptics are inclined to cast a dubious eye on the future of business in the postwar era. Small wonder, perhaps, that in the face of the increasing variety of bureaucratic regulations and restrictions, they overlook the evidences of the voluntary direction still exercised with that persistence which characterized the best in American business in the past.

Here and there appear instances of an attitude on the part of the sellers, now in the driver's seat, that approaches the too-frequent bureaucratic dictum of "Like it or lump it." They are the small-minded minority who forget that they once sought the public's custom avidly—and that the time will come when they will need to do so again.

But every day, on the other hand, one encounters the courtesy, even out-of-the-way service, of suppliers to help customers in an emergency. Where equipment can no longer be sold, repairs are made at prices higher than prewar but by no means profitable under present labor conditions. Where supplies are no longer available, substitutes are suggested and advice given that yield nothing but the possible good will achieved by helping a one-time customer.

The spirit displayed in such incidents is the opposite of that selfish dollar-seeking picture of the American businessman which the economists and social regulators of the new order seek to paint as a reason for continued government control, as opposed to the free enterprise that has been characteristic of this country's industry and commerce for 300 years.

The prevalence of that free spirit of voluntary service and help in business—especially at a time when the public is accustomed to so many do's and don't's as necessary wartime controls—constitutes a tremendous force surging toward a democratic way of business in the future.

The pendulum was one of the earliest demonstrations of physical laws. It has operated for thousands

The Mirror of the Trade

of years, not only in a material way, but also in human emotions as well. "Action and reaction" describes that activity, and it is one observable all about us, from the responses of the individual to the mass thinking of nations. The present world mess is one tremendous example of the reaction of great groups of people to earlier and opposite pressures.

Those who exercise the wartime controls today may naturally be concerned with the prolongation of regulatory measures after the war. They apprehend a reaction that will tend to swing free of all controls, to break loose from all restraint—with just as dire consequences as strangulating restrictions in peacetime.

While wartime controls are a matter of necessity and are observed on that account, rather than through fear of penalties or punishment, peacetime regulations would imply the recognition of superior minds wise enough to tell the rest of the population what to do. The European experiences with such superior minds do not now uphold their durable wisdom.

So the democratic way of free choice and free enterprise is regarded by most in this country as the safest in the long run. Though it may seem to be the way of trial and error at times, and mistakes that seem unnecessary may occur, they have a way of striking a safe balance. The mistakes are minimized, even though successes are less numerous than if some mastermind could, conceivably, set everybody on the right road. The mistakes, consequently, seldom reach national proportions and never the globe-shocking proportions of the mistakes of the European leaders who thought they were supermen.

Confidence in the return to democratic ways and free enterprise in this country is the message of that willingness to continue under hardship and to serve without profit which is apparent in business relations today. Why use soft words to a customer who cannot buy now? Why continue to advertise what is not currently for sale? Why spend time servicing present accounts at a loss for old time's sake? The answer to such questions is the conscious or subconscious belief of American businessmen that a day is coming when buyers will be free to pick and choose, that merchandise will be available in quantities adequate for the public's needs and

that good will among one's customers is a business asset worth many dollars. In spite of present difficulties and in spite of aspersions implied by some types of regulatory control, the great majority of American businessmen believe that he profits most who serves best—even if he has to wait until after the war for the profit.

CHRISTMAS GREENS.

The nurseryman who has overgrown or cull evergreens on his place waiting to be grubbed out can salvage some of their cost by cutting the branches for sale to local florists for use as Christmas greens. This year such evergreen branches will be in special demand, since offerings of decorative greens to the florists' trade are smaller than in other years, for lack of labor to collect and prepare them.

Arborvitae, hemlock, balsam, spruce, cedar and pine branches are ordinarily supplied from the woods in standard bales of twenty-five pounds, currently priced at about \$1, but collectors offering this material are fewer than in other years.

Some nurserymen already have a trade with local florists in some material. They find buyers for the foliage of other trees and shrubs, at higher prices, among those who want something unusual in texture, color, berries, etc.

Consult florists in neighboring towns if you have not supplied them before. Their business will require all the flowers and greens they can obtain in a short market for Christmas. Your offerings should be made known this month or early in December to be in good season for use at the holidays.

SAVE all cardboard, fiber and wooden boxes. They will become scarcer as production is curtailed.

WHEN manpower and equipment become available for land development and conservation after the war, says the Soil Conservation Service, the nation's crop land area can be increased by 100,000,000 acres, or twenty-five per cent.

CHECK tractors, cultivators and machinery to be stored for the winter and order repair parts you will need. While the farm machinery situation is expected to improve next season, don't risk delays in having equipment in order when required for use.

AMERICAN NURSERYMAN

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The Nurseryman's Forte: To Make America More Beautiful and Fruitful

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Letters from Readers

CATALOGUES TIRE HIM OUT.

Nurserymen are lovable people. It couldn't be otherwise. They are simple folks who spend years of their lives nursing choice plants through drought, storm and disease, hoping that some day someone will come along who appreciates their efforts and reward them with a small sum for all their devotion.

But they show their simplicity in another way also—in a way that annoys me no end. They think that everyone who likes plants is just as fond of work as they are. That sounds like a crazy statement, but I'll prove it is true.

My favorite nursery catalogue is full of wonderful and alluring pictures of fruits and flowers, all illustrated in four colors. It must have cost a small fortune to print this work of art. During the long winter evenings, I frequently thumb slowly through its pages, longing for some of those ambrosial peaches, crisp sprightly apples, lovely fragrant roses and many other plants so temptingly offered. Time after time I go through the same process, but do I fill out the order blank, attach my check and drop it in the mail? I do not! And I'll tell you why.

It's because I am lazy. "Lazy!" you say. "Why certainly it is no trouble to fill out an order blank." True, but when the nursery stock arrives, that is when the work begins. I have the nurseryman's word for it.

If I want my fruit trees to grow, I should dig a hole three feet across and eighteen inches deep. Then I am supposed to put the topsoil in the bottom of the hole, haul away the bottom soil and haul in some more topsoil. It says so in the catalogue.

There isn't a chance in the world of growing lovely roses like those in the pictures unless I turn the soil in the bed to a depth of three feet, put rocks in the bottom of the bed for drainage and then work humus or compost all through the soil. Brother, I'm too practical (and lazy) to fall for all that work. Have you any idea how many tons of the good earth I would have to move before I could finish planting the four fruit trees and twelve roses I had picked out of the catalogue! Well, I have, and before I would do all that work, I'll buy my fruit at the grocer's and get my roses from the florist down the street.

I have another gripe, too. Why

"This screed on nursery advertising comes from the heart," wrote the well known nurseryman who sent it in. "For a long time one of my pet peeves has been the careless way in which nurserymen dish out the planting instructions. I suspect that most of the stuff is written with a pair of scissors because someone who knows nothing about the subject finds it easy to write and the nurseryman copies it. Maybe I am the only one who feels this way about the matter, but a whole lot more could be said."

does the nurseryman in his illustrated literature feel that he has to show someone actually working at the job of planting or pruning or cultivating? Last spring the local nurseryman sent me a 4-page newspaper-size circular, printed in colors, offering a wonderful assortment of fruits, flowers, trees and shrubs. I was sorely tempted to rush down to his place at once and load up with the things I didn't buy from the catalogue. Why didn't I? Well, I'll tell you. That circular was full of drawings of dad lugging 200-pound balled and burlapped evergreens, digging deep holes for shade trees, pruning the hedge and weeding the perennial border.

Work, work, nothing but work! I was so tired when I got through with that circular I turned to a popular magazine for relief. There I was drawn to the advertisements of linoleum, insulating material and paint manufacturers. Did they show the old man hard at work laying linoleum in the kitchen late at night, installing insulation in the suffocating heat of the attic, or wielding the paintbrush at the top of a high ladder? They did not! Everyone knows that these things must be done to enjoy the resulting comforts, but these smart advertisers don't emphasize the fact in their literature or parade it in pictures.

Instead they show a beautiful kitchen with the linoleum already in place, daddy sitting in the cool comfort of an insulated home, and the shining face of a house that has already been transformed with a swell paint job.

Now I am sure that eventually I shall overcome my prejudices and buy that nursery stock I should so dearly love to have. But it would be ever so much easier if the nursery-

man would cooperate. Why not leave cultural instructions out of the catalogue, or put in just the essentials such as the number of trees per acre, the number of hedge plants per hundred feet, or how far apart to plant rosebushes? That's all I need to know before I order. The detailed planting and cultural instructions can accompany the nursery stock so I'll have them when they are really needed. And why can't the instructions be more reasonable? Is it really necessary to dig a hole big enough to bury a cow in order to make a 10-foot shade tree grow?

I think I am correct in my belief that most people are more interested in knowing what nursery stock can do for them than in learning how much work is involved in achieving those results. The advertisement that will sell me is the one that shows the man of the house sitting in the shade of his apple tree gazing out over the glorious array of flowers in his perennial border.

YOUR BUSINESS IS BOSS.

In these times of difficult operations, many have learned the truth about who is the boss in a successful business enterprise. It is put quite plainly by E. R. Ryno, proprietor of the Wayland Dahlia Gardens, in the current issue of "Dig & Dung" in these words:

We have noticed that there are just two ways of looking at one's business. If I am boss and put up the money, naturally I can have everything run exactly my way. I can raise such stock as I want to, I can plant it where I want to, I can harvest it or not just as I want to, and no one, not even my business, can object. But if I expect my business to pay the bills, my business has got to be boss. That is, it tells me to plant such and such items, to plant them at such a time, to plant them in such a place and attend to them in such a manner, to harvest at such a time and to sell at such a price. In fact, I have to do everything just as the business demands it or I don't have any pay check coming in. If I am boss the business is my plaything, but if I am looking for pay from my business all play ideas have to be forgotten and either I do or the business doesn't. I wonder how many men who are working for wages realize that their employer, while apparently their boss, is in fact the slave to the very business that gives them their job and has to follow its dictates even more rigidly than they themselves have to obey orders, or he doesn't draw his pay with the rest of the men.

GORDON EDWARDS, Bellevue, Wash., was awarded a \$13,975 subcontract for landscaping at an Everett housing project, by the Federal Housing Administration.

Germinating *Nandina Domestica* Seeds

By Michel Afanasiev, Oklahoma A. & M. College

The seeds of the heavenly bamboo, *Nandina domestica*, more commonly known as nandina, are borne in a spherical fruit of approximately six-tenths to nine-tenths of a centimeter in diameter, attaining in the late fall a bright hue of red. Clumps of bright red fruit, together with the reddish foliage remaining on the plant through most of the winter, account for the wide and well deserved popularity of nandina in ornamental planting.

Each fruit usually contains two (occasionally one or three) seeds. The shape of the seeds varies according to their number in a single fruit. Seeds borne two to a fruit are hollow semispheres or cuplike in form; those borne three to a fruit have the form of a crescent, or a segment of a citrus fruit. The internal structure of the seed is one of the simplest. The seed consists of a large mass of endosperm cells surrounded by a thin and soft seed coat and contains a minute, hardly distinguishable embryo located at the micropyle end of the seed.

The behavior of the seed of *Nandina domestica* presents one of those relatively rare cases in which the delay in germination is due to the extremely slow rate of the development of the embryo. At the time when the fruit acquires a ripe appearance, dries and hardens on the plant and is usually collected, the embryo is still in its rudimentary form in which the cells are not clearly differentiated.

The most conspicuous change taking place in the seed of nandina prior to germination is that of the development and growth of the embryo. During the present investigation this development appeared to be able to take place under a

variety of external conditions. Some germination was obtained irrespective of whether the seeds after collection were stored dry or moist, at high or at low temperature, although both factors—moisture and temperature—had definitely affected the viability and germination of the seeds.

The most peculiar characteristic in the behavior of nandina seeds is the tendency to germinate during a definite season of the year, namely, during the months of October, November and December. All attempts to overcome this tendency by various means and to secure germination at other seasons were ineffective. These attempts included stratification at low temperature, collection and planting of seeds at various times through the year and application of such forcing agents as sugar, vitamin B₁ and oxygen.

The summary of the effect of stratification on the development of the embryo and the consequent germination of the seeds is presented in table 1. All seeds used in this experiment were collected on the same day from two plants on the campus of the Oklahoma A. & M. College, Stillwater, Okla. One portion of the seeds was placed in the laboratory and allowed to dry; the other was stratified in peat moss and placed in storage at an average temperature of 40 degrees Fahrenheit. Even from a superficial examination of the data in table 1, it is apparent that stratification neither hastened the development of the embryo nor improved germination. Irrespective of the length of stratification (or lack of it), germination took place in October, November and December.

Several forcing agents, sometimes

reported helpful in promoting germination or hastening the development and growth of the embryo, were observed in this study to give but a mild stimulus in the case of nandina seeds.

Soaking the seeds for twenty-four hours in one per cent sugar solution resulted in germination of seventy-eight per cent of seeds in comparison with seventy-one per cent germination obtained from the untreated seeds. Germination of sugar-treated seeds started in November and ended in December; that of the untreated seeds took place in October and November. Both lots were planted on the same day in June. The total effect of sugar treatment proved to be of no practical value—the advantage of a slightly higher germination was offset by the delay in germination for almost a month.

Keeping the seeds for five days under increased oxygen pressure by bubbling pure oxygen through water in which the seeds were held had somewhat similar effects as the treatment of seeds with sugar, namely, a higher germination (eighty-eight per cent against seventy-one per cent) and a delay in germination for approximately one month.

Soaking the seeds for twenty-four hours in a solution of vitamin B₁ (two and four milligrams per liter of water) did not affect germination in any respect (table 2). As in all other instances, germination took place only in the fall or winter.

Equally ineffective were the applications of hydrogen peroxide and potassium permanganate, which have been reported by some workers to improve germination of seeds of certain plants.

Development of the embryo in a

TABLE 1. EFFECT OF STRATIFICATION ON THE DEVELOPMENT OF THE EMBRYO AND GERMINATION.

Sample No.	Storage before germination Type	Period (weeks)	Date of planting (week beginning)	Percent germination											
				Dec. 1938	Jan. 1939	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	Dry, laboratory	2½	12/8/38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.6	25.1 0.0
2	Dry, laboratory	29	6/25/39	—	—	—	—	—	—	—	—	0.0	0.0	0.0	15.0 36.0 0.0
3	Stratification at average temp. 40°	2½	12/8/38	0.0	6.6	13.2	13.2	6.6	0.0	0.0	0.0	0.0	0.0	19.8	19.8 13.2
4	Same	8	1/13/39	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	40.0 10.0
5	Same	9	2/5/39	—	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	40.0 0.0
6	Same	25½	5/19/39	—	—	—	—	—	—	0.0	0.0	0.0	0.0	0.0	62.0 54.0
7	Same	30	6/25/39	—	—	—	—	—	—	—	—	0.0	0.0	0.0	28.0 26.0 0.0
8	Same	36	6/4/39	—	—	—	—	—	—	—	—	—	0.0	0.0	4.0 76.0

seed of nandina appears to be able to take place under wide ranges of temperature and moisture. In the seeds collected before April, the embryos as such were absent. Hardly any development of the embryos occurred in the seeds which were allowed to dry at room temperature and then were stored in the laboratory; in June, after three months of dry storage, there still was but a

lected in late November, 1941; March, 1942, and June, 1942, and stored dry either in the laboratory (temperature 75 to 90 degrees) or in the cold room (40 degrees). Some of the seeds collected in March were planted immediately (the common commercial procedure), some in May and some every month from July to October, inclusive. Seeds collected in the fall of 1941 and in

Somewhat similar reduction in germination due to the extension of the warm dry storage was observed in the seeds collected in June. Here even the best germination was low (twenty-six per cent), evidently due to the loss of viability during the late spring when the seeds remained attached to the plant. Removal of these partly dried seeds from the plant and subjecting them to further drying in the laboratory hastened the loss of viability, reducing germination to twelve per cent after one month and four per cent after two months of dry storage at room temperature.

The behavior of seeds collected in the fall of 1941 and kept dry at a low temperature (40 degrees) suggests the possibility of long storage and late planting without impairing the quality of the seeds. Plantings made in September and October gave as favorable results as the earlier plantings. The only disadvantage of such late plantings was a brief delay in the beginning and the completion of germination.

Summary.

1. The cause of delayed germination of seeds of *Nandina domestica* is the rudimentary state of the embryos at the time the fruit ripens.
2. Seeds of *N. domestica* have a strong tendency to germinate only during the late fall and early winter. Attempts to overcome this tendency by stratification, forcing agents or change in the time of planting were unsuccessful.

trace of the embryos in the seeds. On the other hand, examination of the seeds left on the plant until June revealed the presence of partially developed embryos, having a length of approximately two-sixty-fourths of one inch. The difference in the conditions of the seeds stored dry in the laboratory and those kept outdoors on the plant is primarily that of moisture content, which indicates that the latter is probably the limiting factor in the development of the embryo in dry storage. This conclusion is substantiated by the fact that in seeds collected in March and kept in moist soil for one month the embryos were found to be in the same stage of development as in the seeds allowed to remain on the plant. In the seeds kept in moist soil for three months the development of the embryos progressed somewhat farther than in the seeds remaining on the plant or in those which were kept in the soil for one month only.

Since neither stratification nor the forcing agents provided a means of modifying the tendency of the seeds to germinate during a definite season of the year, it was decided to determine the possibility of accomplishing this by changing the time of collecting and planting the seeds. Although the result of this attempt was also negative (table 3), this phase of the investigation has provided some more information on the behavior of seeds, which may be of practical value to plant growers.

Seeds from two shrubs were col-

lected in late November, 1941; June of 1942 were planted every month from July to October.

Seeds collected in March germinated better when planted immediately than if allowed to remain dry for several months before being planted. This justifies the common commercial practice of collecting and planting the seeds from February to April. The reduction in germination caused by dry storage of the seeds appears to be due to the reduction of viability rather than to the shortening of the period between

TABLE 3. EFFECT OF THE LENGTH AND THE TEMPERATURE OF DRY STORAGE AND OF THE TIME OF PLANTING ON GERMINATION.

Time of collection	Type of storage	Date of planting	Percent germination (cumulative)		
			10/31/42	11/28/42	12/28/42
Fall 1941	Dry cold storage	7/27/42	37	48	49
" "	" "	8/27/42	12	44	60
" "	" "	9/23/42	1	56	68
" "	" "	10/19/42		2	50
March 1942	None	3/5/42	61	61	61
" "	Dry warm storage	5/21/42	52	52	52
" "	" "	7/16/42	10	12	12
" "	" "	8/27/42	8	25	25
" "	" "	9/23/42		1	4
June 1942	None	7/16/42	23	26	26
" "	Dry warm storage	8/27/42	9	11	12
" "	" "	9/23/42		11	15
" "	" "	10/19/42		0	0

the time of planting and the time of germination; seeds stored at a low temperature (collected in the fall of 1941) germinated as well as or better when planted in August, September and October than if planted in July. It is of interest to note that the reduction in germination of the seeds collected in March is rather closely correlated with the length of the dry storage at room temperature.

3. The common commercial practice of planting seeds in the greenhouse during the winter and early spring resulted in a small loss in viability and high germination.

4. *Nandina* seeds can be stored dry at low temperature for as long as ten months without appreciable loss in viability. Seeds held in cold storage for nine or ten months germinated as well as those planted immediately after being collected.

Current Evaluation of Small Fruits

By A. S. Colby, University of Illinois

While the trend is generally toward the planting of many of the new varieties of small fruits where they are adapted, in some cases the older sorts are still being grown. In examining reports from a questionnaire sent to federal and station workers and other authorities in different states, beginning with New Hampshire, we find that the Howard 17 strawberry is still standard there, in spite of the excellent new varieties that are developing. At Durham, the Dresden and Pathfinder are the only new varieties that will equal or outyield Howard 17. Latham is still the standard raspberry. A new grape that seems promising because its fruit matures earlier than Concord is Kendaia, considered in New Hampshire to be the hardiest and most vigorous of the new Geneva varieties. In Massachusetts, the Catskill and Howard 17 strawberries are listed as the most productive and are said to be good shippers. There the Latham is hardy and relatively resistant to mosaic. It was interesting to learn that the Worden grape is favored over Concord in the state where Concord originated, because it is more likely to ripen! Of the blueberries, Pioneer, Rubel and Wareham are most productive. The most important cranberries are Early Black and Howes. In Rhode Island, Catskill is promising, outyielding Dorsett and even Howard 17 in most cases. "Howard is tending to run out with us." Taylor is doing well as a red. Indiansummer seems excellent for a double-crop berry. Connecticut authorities favor Howard 17, Aberdeen and Catskill because of good quality and yield. The Latham raspberry is winter hardy, yields well and is resistant to mosaic. Concord grapes are productive and are in general demand for grape juice. There is an increasing interest in the cultivated blueberries for backyard and commercial planting.

In Pennsylvania, the Concord and Niagara grapes are listed as still in greatest demand for juice and market. Premier and Catskill strawberries are favored because of berry size and high yields. Of the red raspberries, Latham has hardiness and yields well, while Taylor has berry size. Of the black raspberries, Cumberland is still grown because of berry size and yield, while Morrison and New Logan appear promising.

In New Jersey, probably the most profitable strawberries are Lupton, Pathfinder and Catskill. New Jersey 312 is quite promising. The Latham raspberry is standard, with Sunrise promising as a very early variety. "The new Milton looks good if it will be productive enough. It is so vigorous that we may have to prune it differently than the other varieties." A considerable number of varieties and selections originated in other sections are on trial. While they have their good points, many are not being found to be especially well adapted to local conditions.

In Maryland, the Blakemore is the "main variety of strawberries, also Fairfax, Dorsett and Chesapeake in quantity extending the season." Cumberland is the leading raspberry, followed by Plum Farmer and Logan. Some reds are grown, mostly Latham, with some Newburgh. The least promising strawberries are Catskill, Gandv, Big Joe, Premier, Missionary and Klondike.

Still farther south the strawberry variety picture changes somewhat. In North Carolina, the Blakemore is standard because of its earliness, productivity and shipping quality. Massey strawberries have large size and good quality, and the price is high. Klondike is still standard in the Chadbourn section. While the blueberry industry is comparatively new, the early varieties are promising.

While Georgia grows a small quantity of small fruit for commercial purposes, several kinds and varieties are being recommended by the extension service of the University of Georgia for the home orchard, where a seasonal supply of large high-quality fruits is desirable. Georgia is divided into four different sections varying to a considerable degree in climatic conditions. For area 1 (mountain), the Lucretia, Young and Boysen trailing brambles; Moore, Concord, Niagara, Scuppernong and Hunt grapes; Cumberland, Cuthbert and Latham raspberries, and Blakemore, Fairfax, Catskill, Aroma and Mastodon strawberries are recommended. For area 2 (piedmont), the same list is suggested, omitting the raspberries. For area 3 (upper coastal) and area 4 (lower coastal), the list changes more radically, with Thomas, Stuckey, Scuppernong and Hunt grapes and Blake-

more, Dorsett, Aroma and Mastodon strawberries recommended.

The most important small fruit grown in Florida on a commercial scale is the strawberry, with the Missionary the standard variety.

Coming back up north to New York, we find that the Catskill and Premier strawberries lead that group because of productivity. New Jersey 312 is a promising late sort. Special purpose berries are Culver for jam, New Jersey 225 for freezing and Fairfax for quality. The Newburgh, Taylor and Latham are the most promising reds; however, the new variety Milton excels at Geneva, especially in resistance to mosaic. The Chief is of doubtful value. The Sodus and Marion, purples, are standard, with the latter gaining in popularity. The old Columbian "should go out because of mosaic." While the Cumberland, black, is still considered good, the Bristol and the Morrison are most promising new varieties. According to the catalogue of new fruits of the New York State Fruit Testing Association, certain grape varieties originated by the Geneva experiment station are worthy of general planting in that section. For example, the Fredonia, "a good early black, is rapidly becoming a standard variety. Ontario and Portland are becoming the standard early green grapes in eastern America. Westfield, black, is very promising for juice purposes." The Concord grape is the most commonly grown variety in New York.

Moving on westward through Ohio, Indiana and Illinois, we find the varietal lists somewhat similar; however, the Catskill strawberry leads in size and quality in Ohio. Bristol, black, and Taylor, red raspberries, rank high in quality and yield. In Illinois, the most profitable strawberries are Blakemore in the south and Premier in central sections, when red stele root rot is not the determining cultural factor. Under such conditions Pathfinder is being tried because it is resistant to red stele, but some growers want an earlier, firmer berry. Latham is the most commonly grown red, especially in the southern area. Cumberland, black, is still grown, but is too susceptible to anthracnose (often contributing to the so-called winter injury) to be profitable unless it has been properly sprayed. Also susceptible to anthracnose are the Wash-

ington and Indiansummer. The new Tennessee Autumn appears promising. Bristol and New Logan, blacks, are being well received. At Urbana, Sodus and Marion, purples, yield well and the fruit is in great demand. The Brainerd blackberry is vigorous and productive over at least a 6-week period and is usually hardy. Concord is the most popular grape, while Fredonia is being planted for early market, and, when properly pruned, Sheridan has great possibilities as a late blue variety. The small fruit varietal picture in Indiana is comparable to that in Illinois.

In Michigan, Premier almost monopolizes the strawberry plantings, with Catskill the most promising of the newer sorts, although Red Star and USDA seedling 1912 did exceptionally well in the station trial plots in 1942. Of the raspberries, Latham is the principal red. It is not of the best quality, but has enough other good points so that it seems to retain its popularity. Some growers like Taylor. Others grow Chief as an early variety. Marcy produces beautiful big berries, but growers complain that it is difficult to pick until "practically overripe." Cumberland is still by far the most widely grown black, with some plantings of New Logan. The new Morrison looks promising. No new grape plantings have been made in the South Haven section for years. Concord is, of course, by far the most important variety. Because of the renewed interest in wine in recent years, a great demand has arisen for Niagara and Delaware, although no new plantings of these varieties are known to have been made.

The following pertinent information comes from the Wisconsin station: In strawberries Premier is well adapted to a variety of soils, gives good yields on our light soils and meets marketing conditions satisfactorily; Beaver, a local variety, has been grown about as extensively as Premier, is more limited in its soil adaptability, of poor quality, but an excellent shipping berry; Catskill is the variety most promising at present. None of the Darrow varieties appear adapted to Wisconsin conditions.

In raspberries Latham is the most widely grown red raspberry, largely because of supposed hardiness, comprising seventy-five to ninety per cent of planting. Chief is of second importance, being as hardy as Latham but a much poorer fruit. June, trials at the station indicate, is as hardy as, or harder than, either of the above under our conditions

and much more profitable as a commercial berry. As soon as Latham comes on the market in quantity, the price drops. June ripens more than half its crop prior to this price decline.

Black raspberries are not generally recommended for commercial planting in Wisconsin "because of susceptibility to disease."

In Minnesota, the birthplace of the Latham and Chief, reds, these varieties continue to be outstanding. Premier, Beaver and Minnesota 1192 are the leading strawberries. The Red Lake currant, also of Minnesota origin, is the other small fruit listed as hardy and otherwise adapted to the conditions.

The Iowa report lists Concord as far ahead of any other grape. Portland is favored as an early, green variety for home use. Fredonia does not do well. "Moore, Worden and Campbell do not yield up with Concord." Bristol is the highest-yielding black raspberry in the station test plot, but was surpassed by at least one of the Ames seedlings. Latham is the best red. Many of the new varieties are not winter hardy.

In Missouri, Aroma strawberry, with Premier and Blakemore in northern counties, Concord grape, and Cumberland and New Logan black raspberries are the leading commercial varieties. Promising are Fredonia, Sheridan, Barry and Seneca grapes; Bristol and Sodus raspberries, and Pixwell gooseberries, with the Culver strawberry for southern counties.

Prominent in the list of strawberry varieties recommended for planting in Kansas are Excelsior, Dunlap, Premier, Aroma and Gandy, with Progressive, Superb and Mastodon in the everbearing group. Earliness, hardiness and drought resistance are qualities especially desired in most sections of that state. Of the raspberries, the blacks are the most widely adapted and the most likely to succeed in Kansas. These include Black Pearl, Cumberland, Kansas and Plum Farmer. Next to blackcaps, blackberries are the best adapted brambles, with Eldorado the leading variety. It will be noted that most of these varieties are relatively old. Since red raspberries are frequently damaged in winter by the dry cold weather and in summer by the hot winds, they are recommended only in the eastern part of the state, where they can be protected during the winter. The leading varieties are Chief and Latham. The grape variety list includes Concord, Moore, Worden

and Niagara, with Beacon, a Missouri hybrid, recommended for trial in the dry sections of southwestern Kansas.

In Tennessee, the Blakemore is still outstanding, with Klondike losing out altogether. Latham yields well. Tennessee Autumn red raspberry, originated by the station, is promising. Both the Boysen and the Young blackberry are productive, but the fruit is too soft for distant markets.

In Kentucky, we find that the Blakemore is out in front in the Bowling Green section because of consistently good yields and processing value. Aroma leads in the Paducah area, although its popularity is decreasing because of low yields. Premier is favored in the Louisville district and in the bluegrass area of central Kentucky. The Dorsett strawberry is a poor plant maker. Fairfax, although of excellent quality, produces a small crop. Dresden is disappointing because of uneven ripening of the halves of individual fruits. Catskill has been outstanding in production for several years in varietal tests at the station.

From Arkansas, the leaders in grapes are Fredonia, probably Westfield and other early-ripening blue varieties. In strawberries, Blakemore acreage far surpasses any other in the state at this time, with Aroma being grown to some extent in northwest Arkansas. Among blackberries Lawton leads, with a scattering acreage of Early Harvest, Eldorado and Ozark Beauty. Alfred has given us some promise of being adapted. Boysen and Young lead the other berries.

In Oklahoma, Early Harvest has been the leading commercial blackberry. It is losing ground to Early Wonder and Lawton, which are more winter hardy and bear better berries. The Boysen and Young probably come next, with the Boysen gradually taking the place of Young because of better production and greater hardiness. Concord continues to be the leading commercial grape "because it is so well known." It is not a satisfactory variety for commercial use except in the extreme northeastern corner of the state because the fruit ripens unevenly. Moore and Campbell are more profitable than Concord, according to station experiments. Seneca has great promise as a commercial variety. Heavy-producing varieties for jam, jelly and juice include Carman, Extra, Bailey and Muench. "The Blakemore strawberry has rapidly advanced to first place for com-

[Continued on page 23.]

Experiences in Wartime Year

By C. W. Wood

It has been the custom in former years to devote our space in a few fall issues to the experiences with new or unusual plants during the past twelve months. It would be possible to use at least one issue for that purpose this fall, but before doing that I shall tell a few of the problems and their solutions, or at least partial solutions, which have been encountered and worked out here in north Michigan. And as we go along I shall draw upon correspondence with other neighborhood nurserymen and observations in their establishments.

The headaches of last spring, with its severe labor shortage, are not news items to anyone in the trade. And as we proceed labor will be scarcer and scarcer until the end of the war releases the millions now tied up in the armed forces and war production work. Nor is that news or a new idea. But it may be profitable to explore the situation to see how some nurserymen are meeting the changing conditions and what they are planning for the future. I do not advance my own partial solution as the ideal for others, but it seemed the best at the time and continues to have a certain amount of merit as time goes on. It would be well to point out, though, that this nursery is entirely devoted to herbaceous plants. Whether or not the same tactics would work with woody plants, I cannot say.

Sensing the conditions in the labor field would grow steadily worse, we commenced last year to cut down on the production of ordinary stock and to build up on plants which retail at 50 cents or more. That meant elimination of much of the ordinary material, including the moss phloxes, arabis, cheiranthus and others of that class which most neighborhood growers look upon as their bread and butter. It also meant the featuring of the rarer things, such as named geums, named hybrid pinks and recent introductions. It turns out to be a heavier investment of money and a lower investment of labor, with fewer sales for more money and, the way it looks so far, at a better profit margin. We shall continue to follow these lines until labor conditions return to normal or we are forced out of business entirely. A small reserve of propagating stock of the bread-and-butter plants has been kept for future use.

There is a chance here, it seems to

me, of becoming too conservative and missing out on the big business which observers are predicting at the end of the war. If we do not commence propagation of the ordinary items in time to reach the end-of-the-war buying, there will be a season or two of lost opportunities marked up against us. On the other hand, most of us cannot possibly, with our present help, keep a mass of material on hand, waiting and hoping for that happy day. It may be that we shall have to adopt the plan of some growers of letting their stock plants grow into big clumps, which will be broken up into small pieces and grown as quickly as possible into salable plants. That will be largely governed, of course, by local conditions, labor conditions, probable demand (often indicated by previous sales) and available space deciding the procedure to follow. In this connection, may I refer you to the lead editorial of the September 15 issue of the *Nurseryman*, which is the clearest presentation of "The Post-war Outlook" that I have read.

Although gas rationing is an old story to all of us, it remains an ever-present problem to us business people, not alone because of delivery curtailment, but also because it keeps customers away from our places of business. If they cannot come to see us, we have to plan to go to them, and so long as rationing continues, we cannot literally follow out that idea; so we must resort to mail-order selling, and that means more advertising. The mention of advertising brings to some the vision of newspaper and magazine space, but it really means more than that. In fact, it will mean little of that form of advertising to most of us; rather it will mean direct-mail advertising, including forms we have seldom used before. Being the possessor of a small printing press, I have had an opportunity to test out a lot of ideas since the days of gas rationing struck us, a few of which (and a few observations of what others have been doing) may be stimulating of thought.

Talking recently to a florist who uses blotters consistently in his advertising, I was told that careful check had shown them to be a good advertising medium, even among his woman customers. It is the general opinion, I believe, that blotter advertising is only effective among businessmen. This expression, then, opens up a new avenue of approach

to the ladies. Speaking of blotters as an advertising medium reminds me that layout and typography have more to do with attention-arresting display than in almost any other form of advertising. That is a matter on which a good printer could set one straight, but a file of well arranged blotters would richly reward one with ideas. And that reminds me that a file of advertising pieces, showing how others use type and layout to put their messages across to their customers (actual and prospective), is a valuable possession for anyone that expects to employ direct-mail selling.

In addition to blotters, with their general message and an occasional one calling attention to timely work in the garden, and a modest price list, I have found it generally profitable to have several small circulars (3x6 inches in this case) on hand at all times, each one devoted to a single item. For instance, one last spring was devoted to *Ruellia ciliosa*, telling about its summer-flowering habit and ease of culture; another dwelt on the good points of *Potentilla fruticosa* purdomi. I just made a check of the results of using these little pieces and found that the former sold 110 plants and the latter cleaned out the entire stock of plants.

These circulars are enclosed with all outgoing packages and sent with monthly statements and with the ordinary letter of everyday correspondence. The idea, as I see it, is to keep fresh offers before one's customers at all times. And if the circulars are used in the way outlined here, the only expense is for the printing and the little time it takes to put them in the packages and envelopes.

Speaking of time reminds me that laborsaving short cuts may mean the difference between staying in business at some profit or dropping out entirely during these abnormal times. For instance, one of our leading sellers for years has been collections of ten or twenty rock border plants. They have been listed at a certain price, depending upon kind of stock available, time of year, etc., with growing directions and labels included. With the coming of the labor shortage, we found it was either going to be necessary to discontinue the offer or standardize the product and procedure. So now we offer these collections only in year-old stock of easily propagated material, such as plants which can be divided in mid-

summer, when work is generally slack, and sold the following spring as yearlings. The divisions or cuttings, as the case may be, are planted close together in frames and sold directly from there. Growing directions have been condensed to a single small sheet, under several symbols, one symbol meaning "sun and dry soil," another "shade and moist soil" or otherwise. The labels are printed on narrow strips of gummed paper and carry the name of the plant as well as symbols governing its culture. The label used in connection with the growing directions shown on the accompanying sheet meets all the promises of the sales literature and so far has enabled us to keep the offering going.

When there were plenty of time and help, almost any system of record keeping, so long as it was adequate, answered the purposes. Of course, the more complicated it was, the more time it took. Now that we have to make every move count, it is necessary to cut out all the frills, reducing the bookkeeping to the merest essentials. I thought ours was always as simple as it could well be until I took time last winter to go over every operation. As a result of the revamping, almost a third of the operations and close to half of the time were eliminated. For instance, just a little figuring and some changes of printed forms make it possible to type the address labels while the invoice and shipping instructions are in the typewriter. Instead of addressing each mailing piece separately as we formerly did, four labels to serve four mailings are now done at one time by using the perforated sheets of gummed stock $8\frac{1}{2} \times 11$ inches. There is not room to go into minute details of all the changes made, and it would probably not be profitable to do it if space were available, for conditions here would not likely be the same as in other neighborhood nurseries. It is safe to say, though, that almost any situation can be improved by a little thought. Duplications of effort are a part of most systems of record keeping that have not been submitted to critical attention. It is not, however, necessary to call in an efficiency expert for the average small nursery, because the ability that has built up even the ordinary business will correct most of the mistakes if it is applied to the task.

I should like to go back to the advertising end and devote a little space to that phase, but shall have to content myself with a few generalities. Advertising, as everybody knows, is the very lifeblood of a

mail-order business. And as such it needs the most careful study. There are several texts on the subject, most of the ones I have seen being more general than these notes will be. I have a notion, too, that some of them were written with tongue in cheek. The best way to learn advertising that I know is to clip and file every attractive advertisement that one sees. It may be that the copy does not apply to one's own line, but if it is attention-arresting and makes one reach for the checkbook and fountain pen, it contains material for thought. A particular advertisement may not be of much use at the moment and one may not be able to see what there is about it that makes it attractive, but as the technique unfolds with study, the working out of the idea will reveal itself. More than one in my circle of friends who are what I call heavy advertisers have gone up the ladder along these lines. It is not necessary to caution anyone about slavishly following the working or method of approach in these clipped advertisements, for the copycat is merely ridiculous; rather, the way the writers have reached their goal—an inquiry or, better yet, an order—is what we want to learn. Then we can go our own way in reaching that end.

I suspect that not a few neighborhood growers who have been forced into the mail-order end of the business by present conditions will find it so fascinating that they will continue after the causes have ceased to operate. It is often a hard row, though, for the first few years.

J. BRADFORD MILSTEAD.

J. Bradford Milstead, last month elected vice-president of the Oklahoma State Nurserymen's Association, is sales manager of the Shaw-



J. Bradford Milstead.

nee Nursery, Shawnee, Okla., of which T. A. Milstead is manager. "Brad" grew up in the Shawnee Nursery and is familiar with every phase of the business from the seed-bed and grafting bench to the finished plants and trees. He attended Oklahoma A. & M. College. He is married and has one daughter, Christine Anna, 2 years old.

A. A. N. RECEIVES AWARD.

For its contribution to the victory garden program in 1943, the American Association of Nurserymen has been awarded a certificate by the National Victory Garden Institute. The certificate, which stated that the American Association of Nurserymen had made a genuine contribution to the national war effort by the encouragement of the victory garden program, thus rendering a patriotic service to the nation, now hangs proudly in the Washington office of the organization.

Accompanying the certificate was a letter to Frank S. LaBar, Stroudsburg, Pa., president of the A. A. N., which read as follows:

"It is a great pleasure to inform you that the American Association of Nurserymen was unanimously chosen by the judges to receive the certificate award of the National Victory Garden Institute for the very real contribution to the victory garden program in 1943. The judges were Richardson Wright, editor of House & Garden magazine; J. W. Johnston, horticultural editor of the New York Herald Tribune, and Carl F. Wedell, secretary, Greater New York Victory Garden Council and head of the school of horticulture, State Institute of Agriculture, Farmingdale, L. I.

"Please accept our heartiest congratulations and best wishes. It is generally agreed that the victory garden effort was a great success this year, and we are now planning for even bigger and better gardens next season. No doubt your association will continue its efforts along this line."

STATUS OF GROWING STOCK.

When the real estate on which a nursery had been conducted was sold, separately from the growing stock, in bankruptcy proceedings, the purchaser of the land insisted that the stock was legally as much a part of the real estate he purchased as the grass and permanent trees growing on it. On the other hand,

the trustee in bankruptcy insisted that the nursery stock, consisting of trees, plants, shrubbery, etc., kept for sale, constituted personal property, which could be sold separately. Ruling that the trustee was right and that the purchaser of the real estate did not become the owner of the nursery stock, the United States District court for the western district of Pennsylvania said in re Pennsylvania Nursery Co., 7 Fed. Supp. 726:

"In the determination of the dispute we have had no Pennsylvania case cited to us, and the decisions of other states in respect to nursery stock are not in agreement, some cases holding it to be realty and an approximately equal number holding it to be personalty.

"The testimony in the case and the finding of the referee are to the effect that all the trees, shrubbery, etc., sold had been planted by the bankrupt for purposes of sale and not for permanent continuance in the ground. Under such circumstances we can see no definite reason why they should not be classed with growing crops and, as such, impliedly severed by the adjudication in bankruptcy.

"The underlying reason for the rule in respect to growing crops is found in the fact that they are the fruits of labor and not the natural outgrowth of the soil. The nursery stock has been planted and cultivated by labor and differs in that respect from corn only in the fact it is not usually taken from the ground as a yearly crop."

W. T. HANNER RETIRES.

W. T. Hanner, who for many years has been general manager and secretary-treasurer for the North State Nursery, Julian, N. C., has sold his nursery to the Gilmore Plant & Bulb Co. and will retire from business at the end of the fall shipping season. G. G. Gilmore will become general manager and secretary-treasurer upon the retirement of Mr. Hanner, who will continue to live at Julian.

C. H. B.

PETTERSEN OREGON OFFICER.

In the report of the fall meeting of the Oregon Association of Nurserymen in the American Nurseryman of October 15, A. C. Peterson, formerly of Peterson & Dering, Inc., Scappoose, was named as the newly elected secretary. This was an error. The new secretary is A. E. Pettersen, of Doty & Doerner, Inc., Portland.

OBITUARY

R. Marion Hatton.

R. Marion Hatton, secretary of the American Rose Society, died October 15, at his home at Harrisburg, Pa. He had been ill for a short time with a cold, and his death was the result of a heart attack.

Mr. Hatton was a prolific writer for American and foreign horticultural magazines and for more than a decade had been an editorial writer for the J. Horace McFarland Co. Before he succeeded the late G. A. Stevens, who died in 1935, as secretary of the American Rose Society, Mr. Hatton was in charge of the research department of the Conard-Pyle Co., West Grove, Pa. He was a member of various horticultural societies, including the Royal Horticultural Society of England, and was a past president of the Rhode Island Horticultural Society. He planned and was an adviser for the noted municipal rose garden at Harrisburg.

Funeral services were held October 18, followed by cremation at a Reading, Pa., crematory. The deceased is survived by his widow, Mrs. Ruth A. Hatton; a brother, John F. Hatton, Van Nuys, Cal., and two sisters, Mrs. Henry B. Hannum, Dallas, Tex., and Miss Edith Hatton, West Chester, Pa.

E. F. R.

J. Rees Dews.

J. Rees Dews, formerly chief inspector of the orchard and nursery division of the Oklahoma department of agriculture, was killed in an airplane crash in Florida early in October. Mr. Dews had only recently returned to this country after serving as a naval photographer on Guadalcanal for a year. He was receiving four months' additional training at Pensacola, Fla.

Mr. Dews was one of the owners of the Chickasha Greenhouse, Chickasha, Okla., a business founded by his grandmother, Mrs. Stella Johnston, in 1892. Mr. Dews and his two sisters inherited the business from their mother, Mrs. James Dews. He became a deputy inspector for the Oklahoma department of agriculture in 1939 and was appointed head of the orchard and nursery division in October, 1940. He also served as secretary-treasurer of the Oklahoma State Florists' Association, resigning this office and his position as chief inspector at the time he entered the service.

His wife and sister, Miss Maude Dews, have carried on the business

since that time. Funeral services were held at Chickasha the week after his death.

Samuel Simmonds.

Samuel Simmonds, Towson, Md., died October 19 at the University hospital, Towson. He had been ill with pneumonia for a short time. He was 70 years old.

He was born at Brimsfield, Herefordshire, England, in 1873 and started his gardening career with Captain Salway of Brimsfield, with whom he stayed until he came to this country in 1900. At that time he was the gardener for the L. Z. Leiter estate at Washington, D. C., a position he held for a period of about twenty years. For a short time he was associated with George Cooke, Washington florist, and then worked on a private estate in the Green Spring valley. In 1922 he became associated with Towson Nurseries, Inc., at Towson and remained with this firm until his death. His expert knowledge of gardens and flowers was responsible for many of the beautiful gardens in the Baltimore area.

Mr. Simmonds was a member of the National Association of Gardeners, being one of the oldest members of the Washington, D. C., branch, and when the Baltimore branch was organized, he was transferred to it and had many friends among the members of the association. Four of the local branch members of the association were pallbearers at the funeral.

John H. Peak.

John H. Peak, Selma, Cal., discoverer and developer of the Peak cling peach, died at his home October 2 of a heart attack. He was 76 years old.

Mr. Peak, who moved to Selma fifty-three years ago from New York, discovered the peach in his orchard in 1916 and at the suggestion of the late Luther Burbank, developed it as an early-ripening variety. In 1937 he received a gold award of merit from the California Association of Nurserymen.

Lieut. Vance Shield, Jr.

Lieut. Vance Shield, Jr., was recently killed in action in Sicily. He had been in north Africa since last November and was in some of the heaviest fighting.

He had attended many meetings of the National Shade Tree Conference with his father, who is a prominent member of that organization and is engaged in tree work in the St. Louis area as the Shield Shade Tree Specialists, Clayton, Mo.

This Business of Ours

Reflections on the Progress and Problems of Nurserymen

By Ernest Hemming

PERFECTION IN TREES.

All my life I have been interested in trees, all kinds. I have seen millions of them, in nurseries, forests, parks, on private grounds, along roadsides, everywhere, yet how rare it has been to come across a perfect specimen. A nurseryman is perhaps fortunate in that he sees near perfection, but it is in the trees' juvenile stage only, say up to six to eight inches caliper. Then, again, what is perfection? A lumberman's perfect tree would be judged by the number of feet of lumber it would produce, or some other economic consideration; an artist's, by its picturesqueness or some quality not necessarily inherent in the tree, but the perfection I have in mind is the perfect development of a particular species at its maturity, growing where it could come to the full development uninfluenced by other growth. I recall as a boy seeing *Araucaria excelsa* in pots, always such a symmetrical subject, and fifty years later or so I had the thrill of seeing mature specimens at St. Georges, Bermuda, planted in positions where they could come to their full glory.

One occasionally sees a beech, an oak or other deciduous tree growing in a park where it has been allowed to develop its own particular habit, but how rare it is to see a perfect pine or other evergreen, especially of the native kinds. Right here in the loblolly and Virginia pine country I have yet to see even a near-perfect specimen. The reason, no doubt, is that by far the greater percentage of people look on trees as lumber or as just trees. They never think of them other than as forest trees with straight trunks and with a few branches at the top, caused of course by their being crowded when young. A piece of virgin white-pine forest is an inspiring sight, but as a plantsman and nurseryman I have to confess to a weakness for the individual tree developed to the full glory of its kind. The exotic trees have a little more chance of being planted where they can develop their full characteristics in a natural way.

There is a tendency of some of our landscape schools of thought to look on all growth as plant material, merely material to carry out their design. Maybe it is following nature, but gardening consists of helping the individual plant to come to its best.

Perhaps in the new era which is to come our common woodland trees will become the aristocrats of the arboretums. E. H.

SAWDUST AS MULCH.

Sawdust might well be used more generally as a mulching material by gardeners and fruit growers, says Prof. R. C. Collison, soil specialist at the New York state experiment station at Geneva. While sawdust does not smother grass and weeds quite so well as some other mulching materials, it has many advantages, including ease of handling and low cost, and it is usually available.

Many examples can be cited where sawdust has been used successfully in orchards for years, says Professor Collison, while it has proved especially effective in blueberry plantings. By conserving soil moisture and lowering soil temperatures, it should also be valuable for mulching raspberries. "Probably the main reason why mulch is not used more widely is the cost and scarcity of materials suitable for the purpose," he continues. "The more common ones used include straw, hay and peat moss. Sawdust, a rather common and comparatively cheap material in many localities, has never been used extensively, probably because it is generally considered injurious to soil. Many people seem to think that it makes soil 'sour'."

This is true to a limited extent if the sawdust is intimately mixed with the soil, it is explained, although its acidifying property is less than that of peat moss. Also, hardwood sawdust would be somewhat less acid than softwood sawdust. This effect, however, is slight if the material is used only as a surface mulch. Even when

mixed with soil it is not serious and may be overcome by applying a little lime, and loses significance if the soil is of limestone origin.

"There is another effect of sawdust and similar materials when mixed with soil which may cause some temporary trouble," says Professor Collison. "When the soil organisms are breaking down organic materials, so much of the available soil nitrogen may be used up that the growing plants will become starved for nitrogen until the process is completed. The remedy, obviously, is to apply more nitrogen to the soil in the form of manure or mixed fertilizers. Sawdust is no more troublesome in this respect than many other organic materials that may be mixed with the soil."

FUMIGATION AND PLASTICS.

The recent use-coordination of such diverse chemical products as plastics and fumigants appears to have solved a big problem of grain and feed dealers, food processors, warehousemen and seedsmen. The problem is how to save tons of insect-infested materials that are not located conveniently near adequate facilities.

The solution lies in fumigating the grain, seeds, etc., with methyl bromide gas carried beneath an ethocel-coated, hence gastight, tarpaulin through a section of tough, flexible impervious saran tubing. The Dow Chemical Co. manufactures both the fumigant and the two plastics concerned.

During time of war, it is vitally important that our potential food supplies remain intact. Yet every year, tons of foodstuffs are ruined for lack of available fumigation equipment. This situation can be easily remedied with the methyl bromide-plastic-tarpaulin method. The infested material, whether it be bagged grain, seeds, packaged or boxed foodstuffs, may be fumigated in existing warehouse stacks, pro-

SPECIMEN LANDSCAPE MATERIAL

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- 70 *Magnolia soulangeana*, 8 to 14 ft. high.
- 200 Canadian Hemlock (perfect specimens), 5 to 6 ft. high.
- 150 *Thuja pyramidalis* (perfect specimens), 5 to 7 ft.
- 50 *Juniper burki* (perfect specimens), 7 to 12 ft.
- 40 *Juniper columnaris* (perfect specimens), 10 to 16 ft.
- 60 *Pinus densiflora* (perfect specimens), 4 to 6 ft.
- 300 *Taxus cuspidata brevifolia* (perfect specimens), 2 to 5-ft. spread.
- 500 *Taxus media hicksii* (perfect specimens), 2 to 8 ft.

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Bridgeton, N. J.

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vided the tarpaulin is large enough to cover completely the pile of material and still allow a minimum 2-foot margin for sealing purposes. To prevent leaking at the floor, canvas snakes filled with sand are placed on the marginal excess of tarpaulin. Fumigation should be performed on an airtight surface free of cracks, preferably a concrete floor. Material that must be unloaded from a vehicle should be stacked in a square area to a height of approximately five or six feet. Four sacks are then placed on top of the pile in an upright position to form what is known as a gas expansion dome, where the gas is introduced to the tarpaulin-covered pile from the gas cylinder, or convenient one-pound can, through Dow's flexible saran tubing. Saran tubing and the ethocel-coated tarpaulin are amazingly suited to this difficult application because of their outstanding resistance to fire, heat, gases and chemicals.

One and one-half pounds of methyl bromide per thousand cubic feet of estimated space under the tarpaulin are recommended for fumigation of agricultural seeds and grain. The material should be exposed to the gas for a period of twelve hours at 60 degrees. In the event finely divided bagged food products or packaged goods are to be fumigated, the exposure period should be extended to eighteen hours.

At the expiration of the fumigation period, the tarpaulin is partially pulled back from the material to allow for a 30-minute airing. Another thirty minutes should also be allowed for aeration before workmen can handle the fumigated material with complete safety. This may be determined with the use of a special leak detector torch.

Dow methyl-bromide is noted for its ease of application, rapid ventilation, nonflammability, destruction of insects in all stages, lack of germination injury and superior penetration. These valuable characteristics, together with the fact that operating costs per fumigated ton are comparatively low, make this method ideal.

S. M. GIBBS, Prineville, Ore., has sold the property on West Second street, which he and Mrs. Gibbs operated as Gibbs Gardens, to Melvin McKibben, who has taken possession, but does not plan to continue the nursery and flower business. Eventually Mr. and Mrs. Gibbs intend to move to California to make their home.

PLANT NOW

and keep up your stock.

You will probably be too busy next spring.

SEEDLINGS

	100	1000
Abies concolor, 4 to 6 ins.....	\$4.00
Abies fraseri, 4 to 6 ins.....	3.00	\$25.00
Picea canadensis, 4 to 6 ins....	3.00	25.00
Picea excelsa, 6 to 8 ins.....	4.00	35.00
Picea excelsa, 6 to 8 ins., tr. 6.00	6.00	50.00
Picea glauca albertiana, 3 to 4 ins.....	3.00	25.00
Picea pungens glauca, 6 to 8 ins.....	3.00	25.00
Picea pungens glauca, 8 to 10 ins., tr.....	10.00	90.00
Pinus mughus, 4 to 8 ins.....	5.00	40.00
Pinus nigra (austriaca), 8 to 10 ins.....	4.00	35.00
Pseudotsuga douglasii, 6 to 8 ins.....	3.00	25.00
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Thuja occidentalis, 6 to 8 ins., tr.....	6.00	50.00
Thuja orientalis, 10 to 12 ins., tr.....	6.00	50.00
Tsuga caroliniana, 3 to 4 ins. 4.00	4.00	35.00

CUTTINGS

From 2½-inch pots.

\$12.00 per 100, 500 or over at \$10.00 per 100.
 Ilex crenata bullata.
 Juniperus depressa plumosa.
 Juniperus horizontalis Bar Harbor.
 Juniperus hibernica.
 Juniperus excelsa stricta.
 Juniperus pfitzeriana.
 Juniperus sabina.
 Retinospora plumosa aurea.
 Taxus cuspidata.
 Taxus cuspidata nana.
 Taxus intermedia.
 Taxus media hicksi.
 Taxus cliftoni.
 Taxus repandens.
 Thuja occidentalis compacta.
 Thuja globosa.

GRAFTS

1-year from 2½-inch pots.	10	100
Cornus florida rubra.....	\$3.50	\$32.50
Juniperus columnaris glauca. 3.50	3.50	32.50
Juniperus chinensis neaborensis.	3.50	32.50
Juniperus squamata meyeri. 3.50	3.50	32.50
Juniperus virginiana burki. 3.50	3.50	32.50
Juniperus virginiana canescens. 3.50	3.50	32.50
Juniperus virginiana glauca. 3.50	3.50	32.50
Juniperus virginiana keteleeri.	3.50	32.50
Juniperus virginiana kosteriana.	3.50	32.50
Juniperus virginiana schottii. 3.50	3.50	32.50
Juniperus virginiana pyramidiformis.	3.50	32.50
Thuja orientalis aurea nana. 2.75	2.75	25.00

HESS' NURSERIES

Mountain View, N. J.

Use of Poultry Manure

When many nurserymen are increasing their poultry flocks or going into commercial poultry raising on a large scale, the conservation and use of the manure so derived is a matter of more than ordinary importance. Hence the suggestions of members of the staff of the Florida agricultural experiment station in a recent bulletin are timely.

If properly collected and utilized, poultry manure contains excellent fertilizing properties. One hundred hens produce about three and one-half tons of manure a year exclusive of litter; 100 broilers produce one-half ton of manure in twelve weeks; 100 turkeys produce six and one-half tons of manure yearly.

According to Van Slyke, a ton of fresh poultry manure contains, on the average, twenty pounds of nitrogen, sixteen pounds of phosphoric acid, eight pounds of potash and 500 pounds of humus. In the terminology of mixed fertilizers, poultry manure thus analyzes 1.0-0.8-0.4. Furthermore, it commonly is found to be quite rich in some of the trace elements, notably zinc, that are becoming increasingly important for the normal growth of numerous plants under certain conditions.

Chemical content of poultry manure varies with the weight of the bird producing it, its age, the rate of egg production if laying hens are involved, the protein content of the feed consumed and the digestibility of this protein. Chicken manure is richer in nitrogen than the solid excrement of any other farm animal.

Unlike that in most manures, a portion of the nitrogen in poultry droppings is quite readily available to plant life, thus making it satisfactory for use as a top-dressing in place of nitrate of soda, urea, ammonium sulphate and other forms of readily available nitrogen. However, poultry manure should not be used in close contact with seeds, foliage or young plants, since it will cause burning. The remaining nitrogen is liberated slowly throughout the growing season. Most plants thrive particularly well on a combination of immediate and sustained nitrogen feeding, as provided by poultry manure.

One of the chief values of manure is its content of humus, which not only improves the physical character of the soil, but also increases its

water-holding capacity and its ability to absorb and retain otherwise readily leachable plant foods. It also stimulates bacterial action, which is so necessary for the normal organic transformation that must take place in a live, active soil. Poultry manure contains, on the average, about twenty-five per cent humus. Small quantities of calcium, phosphorus, iron, manganese, magnesium and other minerals found in this natural product are utilizable by most plants.

Chicken manure undergoes rapid decomposition when exposed to proper conditions of moisture. After the residues of the feed stuffs are voided, bacteria continuously change the composition of the complex material. Little phosphorus and potassium are lost, but the loss of nitrogen may be serious—as much as half—unless the manure is handled properly. This loss results mainly from the activity of various bacteria rapidly decomposing the complex nitrogen compounds into gaseous ammonia, which is free to escape into the atmosphere. Because of the escape of this gas an odor of ammonia frequently exists about manure piles.

When exposed to the leaching action of rain much of the plant food value of poultry manure is lost rapidly. This loss should be prevented by storing properly in a shed, covered boxes or barrels if it must be held for some time. A manure shed is preferable for storing poultry manure. If a poultryman is not in a position to construct a shed especially for holding manure, an old poultry house or shed that is not in use may be converted to a storage house for this purpose. Such a house must be dry and well ventilated and should have a concrete floor. Poultry manure, being dry and hot, decomposes rapidly and should be applied to the soil as soon as possible after being voided. Otherwise it should be packed thoroughly

during storage to exclude as much air as possible and so prevent the manure from becoming firefanged and losing much of its value.

If manure must be stored, about ten pounds of superphosphate per hundred birds should be sprinkled over the dropping boards and in the dropping pits once each week. Superphosphate serves as a fixing agent for ammonia, holding it in the manure. By drying the manure more rapidly it also reduces decomposition and consequently reduces odors, as well as the attraction for flies. The added phosphates also increase the phosphorus content of poultry manure. However, in the process of fixing the ammonia much of the soluble phosphoric acid is changed to more insoluble forms which, depending upon the reaction of the soil and other factors, may not become completely available to plant life. Superphosphate is irritating and should not come in contact with the feet of chickens.

In many cases manure excreted by chickens in battery brooders is unusually moist. Instead of trying to dry such manure mechanically, two parts of the moist material may be mixed with one part of ordinary dry soil. Alternate layers of manure and soil should be placed under shelter until dry. Highly absorbent material, such as air-dry peat, also may be found quite helpful as a litter on dropping pans, provided it can be used in such a way that its dustiness is not objectionable.

Wood ashes or lime should not be mixed with poultry manure, since both materials induce rapid chemical changes resulting in heavy loss of nitrogen.

The kind of litter used on the poultry house floor has a decided influence on the fertilizing value of the resulting manure. The litter should absorb the liquid portion of the feces and thereby retain the full fertilizing value of the manure. Furthermore, the litter preferably should have fertilizing value itself.

Where composting of poultry ma-

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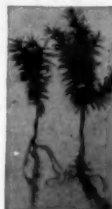
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QUALITY EVERGREENS

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nure is contemplated, either alone or with other materials, the usual directions should be followed, especially in regard to keeping the well formed heap compacted and moist. If an appreciable percentage of manure is used in the compost it will greatly reduce or even obviate the need for the chemical treatment otherwise required by such low-nitrogen materials as straw, leaves, etc. However, such treatments will do no harm and will add to the fertilizer value of the finished product.

Poultry manure is an exceptionally good source of fertility for lawns and golf greens, where it may be applied in the spring or during the summer. Where available, it is satisfactory also for pasture grasses, corn and vegetables. It can be applied quite heavily to most vegetables. It is regarded as one of the finest fertilizers for flowers and may be spaded under or applied to the surface of the soil for either annuals or perennials. Where it is desired to balance the manure in terms of nitrogen, phosphoric acid and potash, this can be done either by calculating the required additions and mixing them with the manure if it is sufficiently free of coarse material to handle this way, or the supplement can be mixed and applied separately. In calculating the supplement, consideration should be given to the nature of the litter as well as to any chemical treatment, such as superphosphate, that has been used. In undertaking to sample complex materials of this type, naturally all of these factors must be taken into consideration if a representative sample is to be obtained.

General recommendations are that not over three to five tons of poultry manure per acre should be applied for fertilizing crops subject to burning. This, of course, will depend to a considerable extent on the manner in which it is handled. When placed in the row the rate of treatment must be reduced considerably. Care must be exercised also not to seed too close to the fresh material or the young seedlings most certainly will be damaged. Application a couple of weeks in advance of seeding, with good conditions of moisture, will tend to avoid danger if the material is incorporated well with the soil.

ANDREW DURKIN, retired foreman of Amawalk Nursery, Amawalk, N. Y., where he was employed for seventeen years, died October 8 at his home at Yorktown Heights. He was 74 years old. He had been in ill health since last March.

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Grafted, hardy varieties only.

AZALEA KAEMPFERI HYBRIDS.

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Perfectly shaped; transplanted.

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Young, thrifty plants, selected varieties.

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New York Organizes

Representatives from western New York, Long Island and the Hudson River valley met at Albany September 30 to consider the unification of the nursery industry in New York state into one state-wide organization. It was decided that a state-wide organization was badly needed to handle matters pertaining to the general welfare of all nursery interests in the state, and with this agreed upon as a starting point, it became only a matter of putting the cards on the table, ironing out difficulties and working out a plan of organization that would be mutually helpful to all sections of the state, as well as to all individuals concerned.

A tentative program was agreed upon, to be taken back by the representatives present to their various groups for counsel and consideration. The new organization is to be called the New York State Nurserymen's Association. The western New York group will give up its present name and incorporation to the state-wide group and will organize as the Western New York Nurserymen's Association, or some similar grouping.

The New York State Nurserymen's Association is to be composed of eight representatives from the industry, divided on the basis of two from the Long Island association, two from the Allied association of the Hudson River valley and four from the Western New York association, which at present includes the remainder of the state.

Each of the three groups is to hold meetings or otherwise to consider and discuss the proposals and elect its representatives as soon as possible. A report has already been received from the Western New York Nurserymen's Association, which held a meeting at Rochester October 15 and elected the following representatives: D. C. Brown, Rochester, for one year; R. L. Holmes, Newark, one year; L. C. Engleson, Newark, two years, and Howard Maloney, Dansville, two years. Alternates from this group are as follows: E. B. Steadman, Newfane; Phil White, Mecklenburg; Ray Rice, Geneva, and John Kelly, Dansville.

Each of the three groups in electing its own representatives for a 2-year term will for the first year elect half of its representatives for one year and the other half for two years, so that their terms of office

will overlap. The elected representatives will meet and organize as soon as possible. They will elect a president and a vice-president from their group and a secretary-treasurer from either within or without the group. A majority vote is necessary.

Each group will pay a proportional initiation fee—\$100 from the Long Island association, \$100 from the Hudson valley group and \$200 from the third organization. Thereafter, each group will contribute \$2.50 per member per year to the new state association.

The first meeting of the newly formed New York State Nurserymen's Association will be held at New York during January of 1944. Future meetings thereafter will be rotated and held in different parts of the state, as will suit the welfare of the industry. The meeting or meetings of the state-wide organization will be sponsored and organized by the group in whose territory the meeting is held.

Each of the three present groups—the Allied, Long Island and western New York—will retain its autonomy in all local matters, but will leave state-wide matters and matters concerning the general welfare of the trade to the state-wide association.

This plan has been submitted to the three original groups for consideration and action. Generally speaking, the plan is sound. There may be some details which will have to be ironed out; however, that should not be difficult. In the light of the present feeling of frankness, cooperation and statesmanship which

has thus far been evidenced by the representatives, there can be no doubt as to the final successful outcome of the plan.

SCIADOPITYS VERTICILLATA.

An evergreen not commonly seen in the trade is the umbrella pine, *Sciadopitys verticillata*, a plant native to central Japan. It is recorded as being a large tree, attaining a height of 100 feet or more in its native habitat. As seen in this coun-

FALL 1943

ELM—MOUNTAINASH—BIRCH,
Cut-leaf Weeping—WHITE DOG-
WOOD—GINKGO—NORWAY
and SOFT MAPLE—PIN, RED,
BURR and WHITE OAK—LOMBARDY POPLAR—REDBUD—
SWEET GUM—CRATAEGUS—
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In carload lots for fall or next
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Picea excelsa, transplants. Thuja occidentalis, transplants.

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Newport, R. I.

try, it is a relatively narrow, slow-growing, small tree, usually not exceeding thirty feet.

The leaves of this plant are unusual in that they are borne in whorls of twenty to thirty, each consisting of two connate or joined leaves. The leaves are dark, glossy green, three to four and one-half inches long.

The umbrella pine does much better in the cooler, moister, north-eastern states than it does in the middle west. In protected situations in Ohio it has been quite successful, but the foliage often shows considerable winter injury when the plants are exposed. Excellent plants have been seen along the east coast in Rhode Island.

Propagation is usually by seeds, although germination is often low and irregular. Recently some success has been reported with cuttings. It can be used as specimens or for border or group plantings. L. C. C.

RECLAIM PAINTBRUSHES.

Old paintbrushes can—and should—be reclaimed as a war conservation measure unless the bristles are broken. They may be the only brushes available for the paint jobs on the nursery next year. The federal bureau of agricultural chemistry and engineering has issued a statement outlining suggestions for salvaging dry, stiff old brushes.

Soaking overnight in a recommended brush cleaner or, if not too hard, in gasoline or turpentine, is advocated. After the old paint has been softened, it should be scraped off with a putty knife or combed out with a steel comb or brush. This can be repeated if the first soaking fails to remove all the paint.

Shellac brushes should be cleaned with alcohol, and whitewash and calcimine brushes with water.

After most of the accumulation has been cleaned out, the brush should be scrubbed in warm water with a mild laundry soap—never with a strong soap. The excess water should be shaken out and the brush left to dry. The bristles should be straightened out with a scrub brush or comb before completely dry, after which the brush should be wrapped—not too tightly—in heavy paper or cardboard to permit thorough drying and to keep the bristles straight. If the brush is dipped in paint again before being fully dried, the trapped moisture will make it soft and lifeless.

When a brush is being used every day, it should be filled with paint and wrapped overnight in several thicknesses of paper, or suspended in a can

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Green Ash, Caragana Arborescens, Chinese Elm, Hackberry, Ginnala Maple, European Mountain Ash, Black Walnut.

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Red Leaf Barberry, Red Twig Dogwood, Cotoneaster Acutifolia, Golden Elder, Forsythia Ovata, Forsythia Zabeli, Persian Lilac, Common Purple Lilac, Dwarf Ninebark, Tamarix Hispidia, Alpine Currant, Highbush Cranberry.

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Without Ball	Per 10	Per 100
6 to 8 ins. for hedging	\$2.50	\$20.00
8 to 10 ins. for hedging	3.00	25.00
10 to 12 ins. for window boxes	4.00	35.00

Lining-out grade, 1-yr., strong-rooted,
3 to 6 ins.,
\$7.50 per 100; \$60.00 per 1000
6 to 8 ins.,
\$10.00 per 100; \$85.00 per 1000

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	Per 100
1 yr. Transplanted Grafts, 10 to 12 ins.	\$35.00
2 yr. Transplanted Grafts, 12 to 18 ins.	\$0.00
4 yr. Twice Transplanted, B&B	\$0.00
Jun. Casaril, Jun. Burki, Jun. Columarita,	
Jun. Dundee, Jun. Katsaleri, Jun. Globea and	
Jun. Pyramidalis.	

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Evergreens—Shrubs
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BOXWOOD GARDENS

Mrs. R. P. Royer High Point, N. C.

of water. If used intermittently, it may be suspended in raw linseed oil or kerosene; if stored in turpentine the brush is likely to become hard. It should never be allowed to rest on the ends of the bristles more than a few

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Shade Trees
Specimen Evergreens
Evergreen Liners
Flowering Shrubs
Hardy Philox
General Assortment of
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2 to 3 ft. and 3 to 4 ft.

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18 to 24 ins. and 2 to 3 ft.

BARBERRY THUNBERGI

2 to 2½ ft. and 2½ to 3 ft.
And other shrubs. Write us.

Lake's Shenandoah Nurseries

Shenandoah 2, Iowa

SILVER GLOW JUNIPER

Juniperus scopulorum

Silvery blue, almost dazzling, narrow sharply pyramidal to tip, compact, upright growing juniper; hardy. 30 feet. A pleasing, beautiful landscaping tree.

Junior sizes field-grown for nursery planting and specimens from 4 to 8 feet B&B.

VERHALEN NURSERY COMPANY

Scottsville, Texas
Wholesale Only

Book orders early.

SPECIMEN EVERGREENS

SNEED NURSERY COMPANY

P. O. Box 798

Oklahoma City, Okla.

TO NURSERYMEN AT WHOLESALE

We are now booking orders for L.O. stock Hall's Japanese Honey-suckle. Plant now this fall. Also Hall's Japanese selected 3 branches and more, 12 ins. and up, heavy No. 1 from rooted layers. Also red and black Chokeberry; Moss Locust, good liners. Tulip Poplar seedlings, 12 to 24 ins. No. 1. Write us for wholesale prices.

MORTON BROS., Tarleton Nurseries

R. 7

McMinnville, Tenn.

We can supply
PINK FLOWERING DOGWOODS
in quantities.
Shall appreciate your want lists.

**SOUTHERN
NURSERY & LANDSCAPE CO.**
Winchester, Tenn.

QUALITY NURSERY STOCK

Evergreen Seedlings and Liners
Hardy Northern-grown
Inquiries solicited

C. WILSON'S NURSERY Pembine, Wis.

hours, or it will become warped and the flow of paint will be uneven.

A hole should be bored near the end of the handle, and the brush suspended in the paint on a rod or wire resting across the top edges of the can so that the bristles do not touch the bottom. When being put away for a period of time, the brush should be cleaned, thoroughly dried and stored with bristles straight.

ORCHARD COVER CROPS AS SOIL CONSERVERS.

Early June seeding of an annual cover crop in New York orchards is advocated as being far superior to late summer or fall seedings when measured in terms of nitrogen and organic matter conservation and in the reduction of soil and water losses. This and other recommendations on orchard soil management with respect to cover crops and mulches are set forth in a bulletin published by the New York state experiment station, at Geneva, on seven years' investigations by R. C. Collison and E. A. Carleton. A copy of the bulletin may be obtained upon request to the station.

In the station experiments, clean cultivation depleted both soil nitrogen and organic matter, while soil and water losses were heavy. Even allowing weeds to grow had a marked effect on nitrogen and organic matter accumulation in the soil. The seeding of cover crops in June proved the most effective procedure, especially where the cover was allowed to stand over winter and was plowed under in the spring. In fact, any method of orchard soil management which reduced the time during which the soil was not occupied by a crop reduced losses of soil nitrogen and organic matter as well as erosion losses.

Legumes used as annual cover crops in the orchard proved especially effective. These included soybeans and sweet clover and combinations of rye and vetch and oats and sweet clover, all of which can be seeded early and allowed to stand over winter. Permanent grass sod proved to be almost a perfect cover to control erosion losses, but under some conditions it gave rather large water losses. It conserved soil nitrogen and organic matter, the latter more than the former. Continuous alfalfa conserved and accumulated both nitrogen and organic matter.

Snow retention proved an important factor in preventing water losses in orchards, and cover crops which tended to retain snow by their up-standing habit of growth were su-

A New Printing of

LILACS FOR AMERICA

By John C. Wister

the 64-page report of 1941
survey conducted by

AMERICAN ASSOCIATION OF BOTANICAL GARDENS AND ARBORETTUMS

corrected and revised
July, 1943, is now available.

Price, \$1.00

This contains full information as to the color and classification of all known Lilac species and varieties, a list of nurseries in which the varieties are available, a list of recommended varieties and a list of varieties recommended for discard, as well as other notes.

Crab Apples for America

By Donald Wyman

the 81-page report of a similar
survey by the same organization
just published this year.

Price, \$1.00

Gives the history of crab apples in America, together with information about their breeding, propagation and culture. All the 260 varieties known to be growing in North America are listed, with all the available information about the size and color of their flowers and fruits, date of origin, natural habitat, introducer or originator, and sources where grown today.

Send orders to

AMERICAN NURSERYMAN

343 S. Dearborn St., Chicago 4, Ill.



EVERGREENS

For Seventy-eight Years
Growers of Quality Evergreens
Lining-out Stock a Specialty
Write for Trade List

EVERGREEN NURSERY CO.
Established 1864 : STURGEON BAY, WIS.

GRAFTED JUNIPERS

For spring 1944 delivery.
Also transplanted and
finished stock.

NICK'S NURSERY, Anchorage, Ky.

Lining-out Evergreens

Good assortment of standard varieties.
Price list on request.

SCOTCH GROVE NURSERY
SCOTCH GROVE, IOWA

terior to other covers which did not hold the snow so effectively. The effect of mulches on the conservation of soil nitrogen, organic matter, water and soil is also considered in the bulletin.

WINTER MEETINGS.

At the request of officers of other associations, who wish to set dates in as little conflict with other state meetings as possible, the following calendar of next winter's trade meetings has been prepared from the information now available. Additions to the list, or further data as to city or hotel that is to be the meeting place, are invited, as well as corrections if any.

December 6 and 7, 1943, Minnesota State Nurserymen's Association, Lowry hotel, St. Paul.

January 3, 1944, Georgia State Nurserymen's Association.

January 4 to 6, Western Association of Nurserymen, Kansas City, Mo.

January 7 and 8, Iowa Nurserymen's Association.

January 7 and 8, Oklahoma State Nurserymen's Association, Oklahoma City.

January 11 to 13, Illinois State Nurserymen's Association, Hotel La Salle, Chicago.

January 14, New York State Nurserymen's Association, Rochester.

January 18 and 19, Indiana Nurserymen's Association, Indianapolis.

January 20 and 21, Ohio Nurserymen's Association, Deshler-Wallick hotel, Columbus, following short course at Ohio State University, January 18 and 19.

January 25 or 26, New Jersey Association of Nurserymen, Trenton.

January 27 and 28, Michigan Association of Nurserymen, Detroit.

February 1 to 3, New England Nurserymen's Association.

February 2 and 3, Wisconsin Nurserymen's Association, Milwaukee.

BUSINESS RECORD.

Sacramento, Cal. — Frank O. Ward, doing business as the Valley Seed & Nursery Co., filed a petition in bankruptcy October 16, listing liabilities of \$3,109.

THOMAS A. ANDREWS, 65, retired sales manager of Chase Bros. Co. Nurseries, Rochester, N. Y., died at that city October 18. He retired as sales manager of the nurseries in 1928. He is survived by a daughter, Mrs. Arthur Mohr, and a sister, Mrs. E. A. Gottrell.

CHARLES HESS, Mountain View, N. J., is chairman of the Passaic county war board of the United States Department of Agriculture. He is the first nurseryman to hold that position in that area. The Hess' Nurseries are completing a new building, 20x80 feet, for the production of chickens.

LINING-OUT STOCK

	Per 100	Per 1000
Mugho Pine, 2 to 4 ins.....S.....	\$4.00	\$30.00
4 to 6 ins.....S.....	6.00	50.00
6 to 8 ins.....S.....	8.00	60.00
Austrian Pine, 4 to 6 ins.....S.....	4.00	35.00
8 to 10 ins.....x.....	9.50	85.00
15 to 18 ins.....x.....	12.00	100.00
18 to 24 ins.....x.....	25.00	225.00
Scotch Pine, 4 to 6 ins.....S.....	2.00	15.00
6 to 8 ins.....S.....	3.50	25.00
Pinus Tanyosho, 4 to 6 ins.....S.....	2.00	15.00
6 to 8 ins.....S.....	3.50	25.00

Plenty of moisture combined with good soil makes this lining-out stock A-1 for quality. We offer a fine assortment of B&B evergreens.

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Mail address:
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MOUNT ARBOR NURSERIES

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FOR WINTER AND SPRING OF 1944

APPLE TREES, good assortment in leading varieties,

APPLE SEEDLINGS, Washington and Kansas-grown. Good supply straight roots for grafting, surplus No. 2 branched.

Large Assortment of
ORNAMENTAL TREES,
SHRUBS, EVERGREENS, VINES
and PERENNIALS.

Always pleased to receive want lists.

Ask for TRADE LIST

NORTHERN-GROWN STOCK

Specimen Evergreens
B&B

Evergreen Liners

Hardy Fruit Trees

Ornamental Shrubs
and

Fruit Trees

J. V. BAILEY NURSERIES

Dayton's Bluff Station

St. Paul 6, Minn.

For Fall Shipment

LINING-OUT STOCK

American Arborvitae

Mugho Pine, compact type

Colorado Blue Spruce

ANDREWS NURSERY

Faribault, Minn.

MOERHEIM SPRUCE

SCIONS FOR SALE

ILGENFRITZ

MONROE

MICHIGAN

SPECIMEN TREES

2000 to 4000 each: Bolleana and Lombardy Poplars, Chinese Elm, Soft Maple, Red Oak, American Ash in sizes 6 to 8 ft. and up to 16 ft. in height. 2000 Andorra Juniper, 24 to 30 ins.

1000 Juniper Glauca, Canadensis, HHI's Dundee, Keteleeri, Irish, Burki, Virginiana, 3 to 4 ft., 4 to 5 ft. and 5 to 6 ft., well sheared specimens.

500 each: Pear, Apple, Peach and Plum in 4 and 5-year-old bearing-age trees.

Wanted: 5,000 lining-out grapes; 20,000 evergreen and shrub liners.

Egyptian Nursery & Landscape Co.

Farina, Ill.

KATFISH BRAND
SPRAY HOSE
HIGH PRESSURE

ALL SIZES
High-Pressure Couplings
LOW PRICES, PROMPT SERVICE

BROADWAY RUBBER MFG. CO.
Everything in Rubber Since 1901
529 East Broadway, Louisville, Ky.

Washington State Meeting

The annual meeting of the Washington State Nurserymen's Association, held at the Hotel Gowman, Seattle, September 23, was one of the best of its recent gatherings. L. N. Roberson was succeeded as president by W. L. Fulmer, who had previously occupied that position for several years. R. R. Williams, Tacoma, was elected vice-president and Harold T. Hopkins, Bothell, secretary-treasurer.

The program was carried out as planned, opening with an entertaining after-dinner speech, by Judge William Long, of the juvenile court.

Orrin Hale, editor of Northwest Gardens and Homes, related some cases in which advertising in the nursery industry had been the means of marketing surplus stocks or saving a firm from bankruptcy and even making a small fortune at the same time. He suggested a concerted effort on behalf of the group to make the public aware of the services available.

Fred DeSellem, Washington state supervisor of horticulture, spoke of the effort that had made possible the new bulletin, "Virus Diseases of Fruit Trees in Washington," and of the continued work by his department to assist nurserymen to institute control measures. Mr. DeSellem asked the cooperation of every nurseryman to find some means of marking disease-free trees, after they have been quarantined, with a nonremovable, nonalterable label which would not injure the tree in any way. He said, "It is to the advantage of every nurseryman in the state of Washington to take advantage of the assistance our department offers and to make the state of Washington known everywhere for disease-free stock."

The first issue of the Washington state news letter, entitled "Horticultural Gossip," was distributed by Howard Andrews, supervisor of the nursery division of the state department of agriculture. Mr. Andrews asked for suggestions for a better name for this publication, promised a box of cigars for the best name offered. A brief outline of the variety of information planned for dissemination through this channel was given and brought forth hearty commendation from the members.

Acclaim was given to Frank Chervenka, nurseryman and member of the state legislature, for his efforts on behalf of the organization, especially in securing the passage of the lien bill. Mr. Chervenka spoke of

impending legislation of interest to the group and asked for more support. He also discussed the question of the reorganization of the old Pacific Coast Nurserymen's Association and asked for some action before the Portland meeting of the Oregon association.

An interesting talk on "Insects as Vectors of Virus Diseases" was given by Dr. Breakey, entomologist at the western Washington experiment station, Puyallup. Dr. Breakey cited instances where healthy trees had become infected when subjected to infestations of leaf hoppers carrying virus.

"Nematodes and Their Relation to Food Crops" was the subject ably handled by Dr. Wilbur D. Courtney, assistant nematologist for the United States Department of Agriculture at Sumner, Wash. The importance of steam sterilization of soil known to harbor nematodes was stressed by Dr. Courtney. He described in detail the method of applying chloropicrin for the purpose of sterilizing the soil.

Several members indicated their intention of attending the meeting of the Oregon association and were asked to vote as they thought would best benefit the Washington association on the question of reorganization of the Pacific coast group.

Plans were made for quarterly meetings for the coming year. Thirty-eight members attended, some coming from a considerable distance, and all felt well repaid for their effort by instructive talks and good-fellowship of the meeting. L. N. Roberson.

PORTLAND CLUB ELECTS.

The annual meeting of the Portland Nursery Club was held October 20 at the Lincoln Club banquet room of the Winter Gardens restaurant, Portland, Ore. Officers for the ensuing year were elected as follows: Melvin Surface, president; J. Frank Schmidt, Jr., vice-president, and Clayton Lewis, secretary-treasurer.

No special speaker was engaged, but outstanding among the visitors was Gordon Courtright, of the East Bay Nursery, Berkeley, Cal. Mr. Courtright spoke on "Nursery Activities in the Pacific Coast Area."

Much of interest, including plans for future activities, with emphasis on publicity and individual member contacts with the flower and horticultural groups in the Portland area, was discussed. Program activities in the making have been assigned

to the special committee headed by Paul Doty, with J. G. Bacher and Avery Steinmetz cochairmen.

Clayton Lewis, Sec'y.

MEET AT BERKELEY.

The October meeting of the Central California Nurserymen's Association was held at the Claremont hotel, Berkeley.

The entire evening was spent in a discussion of the meeting of the California Association of Nurserymen at Santa Barbara, and reports were made by members who had attended that meeting. The two most important questions regarding the future of nursery business concerned nursery service and the Japanese situation after the war.

The nursery service is a state-supervised project financed by the nurserymen in the form of a nursery license. When this was inaugurated several years ago it was understood by the nurserymen that the funds derived from this tax were to be used entirely in the interests of the nursery business and were largely to aid the men in the business in the state, by providing them with information regarding better methods of culture and disease and insect control. It is the feeling of the leaders in the association that the original purpose of the nursery service has been lost

PACIFIC COAST NURSERY

2244 N. Skidmore Court
Portland 11, Oregon

Our seedlings are all sold for this season's delivery except some No. 2 and 3 apple; but if you want to be protected for your seedlings for fall of 1944, please send your order now so that we will know just how to make our planting to protect our customers. Prices will be in line with the other seedling growers that are set next July. We have Norway and Schwedleri Maples, Cut L. W. Birch, European W. Birch, Chinese Elm and Paul's S. Hawthorn. Nice trees in one and two-year-olds, for this winter's delivery. Please let us hear from you, Your old friend,
John Holmason

Headquarters for . . .

Fruit and Shade trees with vigorous roots and sturdy stems.
Flowering trees, Weeping trees.
Shrubs, Roses, Small fruits.

Catalogue on request

RICH & SONS NURSERY

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THE MOST
COMPLETE LINE OF
TILLAGE EQUIPMENT
IN THE WORLD CAPACITIES 14 IN TO 7 FT CUTTING WIDTHS

ARIENS CO.

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sight of and that it now is a policing, rather than an assistance service.

For some months there has been a committee of the members of the various state units which has met with the director of agriculture and has presented the nurserymen's side of the question. The results of some of these meetings have been reported in the American Nurseryman. A complete report of this committee was made at the convention, and at the suggestion of the director of agriculture, each unit of the state association is now to present to the director its needs in the way of service at stated meetings with the director. These meetings will be held every three months. With the information thus obtained, the director is of the opinion that better cooperation between the state and the members can be had. The membership is not entirely satisfied with the arrangement, but has decided to go along with it for a few months and, if satisfaction is obtained, will continue this plan.

The Japanese situation is a big problem and is of interest to everyone in business in the state. The claim made by those who are strongly in favor of some kind of restriction is that in the past the Japanese, by surviving on a lower standard of living and by using recent immigrants and all of the members of the family on long-hour shifts each day, are able to produce crops at a much lower cost and thus are able to undersell the native-born whites. It was stated that all forms of agriculture suffer from this kind of competition, and it is agreed that it would be a great benefit to all if something could be done about it. Several groups, including the American Legion and the Grange, as well as the various units of the commercial vegetable producers, are taking an active part in urging state or national legislation. However, it is pretty well agreed among many of the members that nothing can be done except to educate the Japanese into a higher standard of living, for many of them are native-born American citizens. The nonnatives are becoming rare and will continue to decrease in numbers. The citizens are definitely entitled to all the rights of any other citizen, and to legislate otherwise would be in violation of the things we are now fighting for. However, the matter is not yet settled, and some kind of control may be developed before it is all over.

Other matters of general interest were the establishment of a publication for the association and the employment of a full-time secretary.

PORTLAND WHOLESALE NURSERY CO.

306 S. E. 12th AVENUE Avery H. Steinmetz PORTLAND, OREGON

Quality Stock

CONIFERS AND BROAD-LEAVED
EVERGREENS
SHADE AND FLOWERING TREES
FRUIT TREE SEEDLINGS
FRUIT TREES
DECIDUOUS SHRUBS
VINES AND BULBS
PORTLAND ROSES

SHADE TREES

A good assortment, 1-yr.
whips to 3-yr. branched.
Finest Quality — Prices Reasonable.
Carload shipments early spring.
Our new catalog is now ready.

Write for our Catalog

A. MCGILL & SON

FAIRVIEW, OREGON

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GOOD WESTERN-GROWN NURSERY STOCK

Fruit Tree Seedlings
Flowering Ornamental Trees
Shade Trees

Grown right and packed right.

Combination carloads to Eastern
distributing points will save you
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MILTON NURSERY CO.

A. Miller & Sons, Incorporators

MILTON—Since 1878—OREGON

OUR SPECIALTIES

Birches—Flowering Cherries, Crabs and
Plums—Chinese Elm—Hawthorns—Lilacs—Lindens—Flowering and Globe
Locusts—Columnar, Globe, Norway and
Schwedler Maples—Mountain Ash—Oregon
Grape—Oriental Plane—Willows.

FRUIT TREE SEEDLINGS

Send us your Want List for Quotations.
Combination Carloads to Eastern
distributing points at minimum freight
cost.

OREGON-GROWN NURSERY STOCK

We have a complete line of shade and
flowering trees, both whips and heavier
branched stock.

Weeping and Upright Flowering
Cherries, Flowering Crabs,
Plums and Locusts, Norway,
Schwedler, and Wiers Maples,
Laburnum vossii—Oaks—Chinese
Elm—Mountain Ash—Birch—
Hawthorns.

DOTY & DOERNER, INC.

6691 S. W. Capitol Highway
PORTLAND 1, OREGON

NOTICE

Decreased production makes it impossible to book orders for new customers. For the duration the limited supply is reserved for our regular trade.

HOWARD ROSE CO.

Hemet, California

ENGLISH ELM

(Ulmus Campestris)
Ground must be vacated next spring.
Block of finished shade trees, calliper
1½ to 2 and 2 to 2½-inch. Priced less
than production cost.

SWINK NURSERY CO.

Swink, Colo.



SHERWOOD NURSERY CO.

EVERGREENS — Propagators & Growers
141 S. E. 60th Avenue PORTLAND, ORE.

AS ALWAYS— OREGON'S BEST SOURCE of GOOD ROSES

But we are temporarily sold up now on
our field estimates. We will have additional
roses to offer after January 1, and
will have a list available after that date.

PETERSON & DERING, INC.

Wholesale Rose Growers
Scappoose, Oregon

Because of the unsettled conditions and such a vague future, it was decided that for the present neither matter be considered further.

Central California nurserymen had also brought back from the Santa Barbara meeting reports regarding the future supplies of nursery stock. In brief, they indicated a general shortage. Specifically, all fruit trees are extremely short, with the commercial demand so heavy that it cannot be filled, thus leaving the home gardener out in the cold. Berry plants are also short, especially Rock-hill strawberries, but there is a fair supply of some of the less known kinds. Citrus trees are all scarce, with navel oranges practically gone and lemons hard to obtain. Roses are only half enough to fill the demand for the bush types, and there are no tree roses to be had. Ornamentals would be in fair supply, if the demand were anywhere near normal, and there would be enough of most of them. Fertilizers seem to be under control, and there will be enough for nurseries and home gardeners. Seeds will, in general, be plentiful, but there will be difficulty in obtaining onion, cabbage, lettuce and beets. Vegetable and bedding plants will be produced in larger numbers than ever before, and unless there is a great increase in demand over this year, there will be enough to go around. Grass seeds for bluegrass are short; the price is up, but the quality good. The rye supply is short because of adverse weather in the north last winter and this summer; perennial rye is all gone.

Several references were also made to the report of the American Association of Nurserymen activities, as made by Dick White. Mr. White presented the work of the national association in the war effort in an excellent manner, and everyone who referred to it recommended that all of the nurserymen present join the A. A. N. if they really want to stay in business.

Guests present at the meeting included John Brady, who is in charge of the home gardeners' department of the Maxwell Hardware Co., Oakland, and John Klass, of Klass & Johnson, Redwood highway. The next meeting will be at San Mateo November 11. W. B. B.

WALTER R. ELSMORE sold the property of Elsmore's Nursery, at 1635 West Florence avenue, Los Angeles, Cal., including furnishings, tools, plants, seeds, supplies and equipment, to Bowbeer's Nursery, of that city, September 30.

ST. LOUIS NURSERYMEN MEET.

The regular meeting of the Landscape and Nurserymen's Association of Greater St. Louis was held October 11 at the offices of Charles W. Fullgraf, Clayton, Mo.

The newly elected officers were to be installed for the coming year, but since Charles W. Fullgraf, president, was unable to attend, the installations were carried over until the next meeting. The meeting was well attended, with Bert Brayton and Corbin Goff, of the state plant inspector's office, present.

Pfc. Fred Larson, former secretary of the association, was present. He is now stationed at Scott Field, Belleville, Ill., in the radio school. He was happy to say that he is again in the landscape business, as the commandant at the field is having him do landscape work at the present time, planting around various new buildings with stock which is growing in a small nursery on the reservation. Fred is looking well and apparently is anxious for action, as the routine training is beginning to become tiresome.

Howard E. Ward, dahlia specialist, had a vase of some of his new creations in dahlias, including the General John J. Pershing, which has received considerable attention at various shows throughout the country. Most of the blooms displayed by Mr. Ward were well over twelve inches in diameter. He explained that the culture was comparatively

easy, and the results were a flower which would keep readily if properly handled after cutting.

OKLAHOMA NOTES.

From Oklahoma City, Okla., J. Frank Sneed, of the Sneed Nursery Co., writes of the marriage of his daughter, Madaline, to Air Cadet Richard Ralph Bloss, Jr., now in training at Douglas, Ariz. The son of Mr. and Mrs. R. R. Bloss, Beaumont, Tex., Air Cadet Bloss will be commissioned a second lieutenant in the army air forces November 3, and the wedding will take place November 7, at the Crown Heights Methodist church, with a reception at the Sneed home. The maid of honor will be the bride's sister, Miss Lucille Sneed.

Jack Sneed was recently commissioned a lieutenant in the United States Marine Air Corps and is now taking further training at Hollywood, Fla. Lieutenant Sneed spent three days at home during the early part of October, en route to Hollywood, and after his month's training in navigation there he hopes for a leave.

Concerning the nursery trade, Mr. Sneed writes:

"We are enjoying an exceptionally nice business in evergreens this fall, and the demand would be much greater if we would get a good general rain throughout the southwest. Of course, you know that fruit trees are practically off the market, and there is also an increased demand for flowering shrubs. As you know,



1 MILLION CANADIAN HEMLOCK

3-year, 4 to 8 ins., \$18.00 per 1000

Finest Stock in the Country—Write Today for Complete Stock List

MUSSER FORESTS, INC. Indiana, Pa.

Oklahoma City was classified as one of the areas in which manpower is at a premium; so we shall probably have all the business we can do with the labor we can pick up."

EVALUATION OF SMALL FRUITS.

[Continued from page 8.]

mercial production," because it makes plants under adverse climatic conditions and yields heavily with fruit size holding up well. Aroma is next in importance. Klondike, formerly the leader, has been discarded in favor of Blakemore, partly because the berries run small at the end of the picking season.

In Louisiana, the Klondike and Klommore strawberries are best adapted. In Mississippi, they are probably the most promising strawberry varieties also.

The wide differences in climate and soil found in Texas are reflected in their varietal picture. Generally speaking, however, the Lawton and Dallas blackberries have performed well. Austin is a good dewberry. Carman is a widely known grape. Late varieties are not recommended because of increased trouble with drought and insects.

In Colorado, the Aroma, Catskill and Gem are most promising, with good yields of good-size fruits. For the same reasons Latham and Newburgh are recommended. Indian-summer yields well in the fall, but is rather late.

The Tokay, Malaga, Emperor, Sultanina (Thompson Seedless) and Muscat of Alexandria are among the leading grape varieties in California, while the Boysen is one of the most important trailing brambles.

The following notes summarize the situation in Oregon: Among strawberries, Marshall is the principal variety grown and used in the frozen pack; Corvallis is profitable for canning in a small locality around Corvallis and Eugene, and Narcissa is a profitable early market berry when grown on proper soil. In red raspberries, Cuthbert is the principal variety grown for shipping, canning and frozen pack, while Newburgh and Taylor are grown for local market and are quite profitable. In black raspberries, Munger and Plum Farmer are usually grown and give good yields. Dewberry types are Boysen and Logan. Oregon Champion is the only variety of gooseberry grown, being used in canning. Currants include Cherry, Fay and Perfection.

In Washington, red raspberries, Washington and Tahoma (of Wash-

PEACH PITS

We Offer for Immediate Shipment 200 bushels, 1943 crop LOVELL PEACH PITS. Good quality. Approximately 4500 seed per bushel.

CASH WITH ORDER. SAMPLES ON REQUEST.

1 to 9 bushels, per bushel.....\$3.00

10 to 49 bushels, per bushel..... 2.75

50 bushels and up, per bushel..... 2.50

SHIPMENT SAME DAY ORDER IS RECEIVED.

STOCK FOR IMMEDIATE DELIVERY

Refer to our 2-page advertisement in the October 1 issue of the American Nurseryman for attractive prices on first-class stock of Hardy Deciduous Flowering Shrubs, Forest and Shade Trees, Vines and Creepers, and Evergreens—Conifers and Broadleaf.

IF YOU FAILED TO GET OUR FALL TRADE LIST, MAILED OCTOBER 15, ASK FOR A COPY.

FOREST NURSERY COMPANY, INC.

Established 1887
By J. H. H. Boyd

McMinnville, Tennessee

J. R. Boyd
President

This Year, More than ever Before, you need a PARAGON SPRAYER



Use it for ten days at our risk. Compare results with what you have been getting from your present sprayer. Fill the container with any spray solution or cold-water paint. Spray your nursery stock; whitewash your greenhouses, barns and tool sheds, inside and out. Note how easily the Paragon delivers powerful, uniform pressure at the nozzle with little effort at the pump handle. Paragon Sprayer No. 3 passes through narrow aisles without jamming at corners. Automatic agitator prevents solution from settling in the tank or clogging at nozzle. We return your money if you are not satisfied after 10 days' trial. Order from your dealer or mail the coupon today.



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1103 State Avenue Harrison, Ohio

Paragon No. 3
7 1/2 ft. pipe, 10 ft. hose, 3 nozzles.
One wheel truck if specified.
\$25.95 prepaid.
Air gauge \$2.50 extra.

☐ Send complete details ☐ Enclosed find order

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LOVELL PEACH PITS
THE
Howard-Hickory
Company
Hickory, N. C.

ington origin) show high yield and resistance to disease and are replacing older varieties. They are adapted to only coastal areas of the Pacific

Send for New Seed List.

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SEEDS — PLANTS — BULBS

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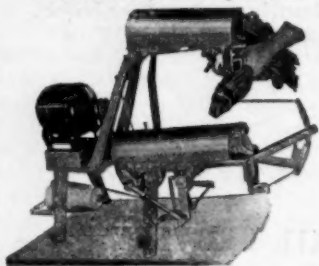
Growers' Accessories

AMERICAN BULB CO.

1335 W. Randolph St. CHICAGO 7
31 W. 27th St., NEW YORK 1

**Save Save Save
Time Twine Labor
with FELINS ELECTRIC BUNCH TYER**

For Bunch Vegetables,
Cut Flowers, Nursery Stock



FELINS

Milwaukee 6

Wisconsin

**OUR
SUBSTITUTE
For BURLAP SQUARES
Has Been Found Excellent**

A Trial Will Convince
Write for Sample
And Detailed Offer

AMERICAN-NATIONAL BAG & BURLAP CO.
INCORPORATED
343 KENT AVE. BROOKLYN, N. Y.

**Original
"COTTONETTE"
NURSERY SQUARES**

Save time, labor and twine in balling.
Sizes in stock from 12x12 ins. to 40x40
ins. Used by leading Nurseries. Write
for prices.

"GIBLALTAR" Frost Covers
Pay for themselves. Ideal windbreaks
and fuel savers. Long lasting. 6-1/3 ft.
wide, price, 50 ft., \$15.75; 100 ft., \$26.00;
150 ft., \$39.00.

NEW AMSTERDAM COMPANY
122 Chambers St., New York 7, N. Y.
We serve leading Growers

North Dakota and Montana Seeds

Northern-grown Tree, Shrub and Wild
Flower seeds. Wholesale crude botan-
icals.

E. C. MORAN Stanford, Mont.

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The perfect mulch and soil conditioner
BAMBOO CANES — RAFFIA — BULBS

McHUTCHISON & CO.
95 Chambers St. New York 7, N. Y.

WIRE

No. 8-9. Galv. soft, \$2.50 per 100-lb. coil.
No. 10. Galv. soft, \$2.75 per 100-lb. coil.
No. 8-9-10. Black, soft, \$2.50 per 100-lb. coil.
No. 12. Galv. soft, \$2.50 per 12-lb. stone.
No. 12. Black, soft, \$2.40 per 12-lb. stone.

BERGEN FLORIST SUPPLIES
251 Hudson St. Hackensack, N. J.

northwest. Strawberries include Brightmore, excellent for preserve trade and fresh market, and Marshall (disease-free), best for quick freezing. Boysen is promising because of quality, flavor, production, hardiness. Among blueberries, Concord, Jersey, June and Stanley show best quality, good size and good production. In grapes, Seneca is for home gardens.

We may conclude from the above facts that the varietal situation in each state is continually changing, at least in part, and while one variety may be satisfactory in a certain state or in certain sections of that state, it may not be adapted to other localities. Stations must of necessity keep up-to-date with their varietal studies. Such information is especially valuable to the individual grower at this time. The country-wide distribution of nursery catalogues, with their individual listings of one or more of all the small fruit varieties known to grow in any one part of the country, makes it doubly important that some one recognized authority in each state be able to say definitely whether or not a particular variety in the trade can be grown there. The practice of the United States Department of Agriculture and certain of the state experiment stations in distributing promising seedlings of their own origination to workers in other sections for testing before being named and recommended for general adoption is a most desirable one. It is also important that the time factor be considered in the testing program. Results cannot be secured in a hurry.

SOUTHWESTERN NOTES.

The summer-long drought at Tyler, Tex., was finally broken October 12 by a fine 2 1/2-inch rain. While the roses in the Tyler area are in fine condition, they probably will average smaller than usual because of the dry weather.

Ed J. Arnhold, Hays, Kan., announces that he is establishing a nursery business.

J. E. Bowman has sold his nursery at Plainview, Tex., to Bob Farmer, who will run it as the Farmer Nursery. Mr. Bowman now operates exclusively at Amarillo, where he has increased his acreage.

Jack Amos, formerly with the Kansas state highway commission, is starting a nursery and landscape business at Parsons, Kan.

Frank Sneed, Oklahoma City, Okla., vice-president of the A.A.N., called on friends among the trade

HYPONEX PLANT FOOD

HYPONEX is a complete plant food that will grow superior plants in soil, or even sand or water. Use HYPONEX for germination of seeds (helps to prevent damping-off). Cuttings (keeps them succulent until ready for transplanting). Transplanting (reduces shock and wilting), and for general feeding of flowers, vegetables, trees and lawns. Better root systems. Greater substance in stems, larger flowers.

Buy from your jobber or send \$1.00 for 1-lb. sample (makes 100 gals.); dollar credited on first order for 1 case for resale or 10-lb. drum for own use.

Write jobber or direct to us for prices

HYDROPONIC CHEMICAL CO., Inc.
315 West 39th Street, New York 18, N. Y.

WANT ADS

**Help and Situation Wanted
and For Sale advertisements.**
\$2.50 per inch, each insertion.

HELP WANTED

Landscape labor, lawn rakers and graders, plantmen, etc., 90c to \$1.35 per hour; 40 to 60 hours per week; time and one-half over 40. Long job. Apply

C. R. PETERSON CONSTRUCTION CO.
Office, Aubury Park Ave., Housing Plan.
Herman Gardens Housing Project, Detroit, Mich.
Or telephone Chicago, Newcastle 0198.

HELP WANTED

TREE CLIMBERS

Experienced for essential employment; high wages and steady work; write giving age, draft classification and experience.

OSCAR F. WARNER
Landscape Forester, Waterbury 29, Conn.

HELP WANTED

Nurseryman or nursery salesman for large city nursery. Excellent future.

MALMO NURSERIES
Seattle, Wash.

WANTED

A partner; or help wanted; or will sell established business; two trucks; a large stock; will make easy payments. Partner preferred. Chicago. Address No. 275, care American Nurseryman, 343 S. Dearborn St., Chicago 4, Ill.

FOR SALE

Nursery, landscaping and tree surgery business; established 17 years; splendid clientele; acre of ground in city limits; large oak and walnut trees; modern home; 3-car garage and shop; bath house and stock; truck; spray rig, ladders and tools; price, \$10,000; retiring.

OAK TREE NURSERY
144 Whitney Ave. Lee Gatos, Calif.

FOR SALE

Nursery and florists' business in southern California; business established August 1, 1919; owner wishes to retire; willing to sacrifice business for less than wholesale inventory; will rent one acre with greenhouses, bath house, two-story shop and garage, reasonable; or will sell land and buildings if desired; F. T. D. member. Address No. 272, care American Nurseryman.

FOR SALE

Landscape nursery; 5 acres with home, well stocked; long established; always did a good business; overhead sprinklers, plenty of buildings; on main highway in western state; will sell property with stock and equipment or just stock and lease land with option to buy; easy terms. Address No. 276, care American Nurseryman.

CLASSIFIED ADS

EVERGREENS—Specimens

BOXWOODS

May be successfully transplanted through the fall, BUXUS sempervirens (standard Boxwood), transplanted, puddled roots:

	Per 100	Per 1000
4-yr., 6 to 8 ins.	\$10.00	\$90.00
5-yr., 8 to 10 ins.	16.00	150.00
6-yr., 10 to 12 ins.	25.00	225.00
7-yr., 12 to 15 ins.	45.00	
15 to 18 ins. Specimens—Balled and Burlapped	Per 10	Per 100

15 to 24 ins., Balled and Burlapped Specimens:	Per 10	Per 100
	\$9.00	\$80.00
Suffruticosa (Dwarf Boxwood):	Per 10	Per 100
	\$15.00	\$125.00

	Per 100	Per 1000
4-yr., 4 to 6 ins.	\$12.00	\$100.00
5-yr., 6 to 8 ins.	20.00	
15 to 18 ins., B&B, Specimen Suffruticosa plants, each, \$2.75; per 10, \$25.00.		

WAYNESBORO NURSERIES, INC.,
Waynesboro, Va.

RHODODENDRON HYBRIDS

12 to 15 ins.	\$1.00	2 to 2½ ft.	\$2.75
15 to 18 ins.	1.50	2½ to 3 ft.	8.75
18 to 24 ins.	2.00	3 to 3½ ft.	5.00

and larger.

BAGATELLE NURSERY,

Huntington Station, L. I., N. Y.

LARGE STOCK OF SPECIMEN EVERGREENS.
Special prices on leading varieties.

Write for wholesale list.

HENRY NURSERIES, HENRY, ILL.

EVERGREENS—Lining-out

EVERGREENS, L.O. STOCK	Per 100	Per 1000
Red Pine, 5-yr. tr., 10 to 12 ins.	\$1.00	\$7.50
Red Pine, 4-yr. tr., 10 to 12 ins.	1.50	11.00
Norway Spruce, 4-yr. tr., 12 to 24 ins.	4.00	35.00
Norway Spruce, 3-yr. tr., 3 to 10 ins.	2.00	15.00
Blue Spruce Colo., 3-yr. s., 4 to 8 ins.	1.50	12.50
Bl. Sp. Colo., 4-yr. tr., 6 to 12 ins.	4.00	
White Pine, 3-yr. s., 4 to 8 ins.	1.00	
Blk. Hills Sp., 3-yr. tr., 10 to 12 ins.	3.50	
Bl. Doug. Fir, 3-yr. tr., 10 to 12 ins.	3.50	
Balsam Fir, 3-yr. tr., 8 to 10 ins.	3.50	
White Spruce, 3-yr. s., 5 to 8 ins.	2.00	15.00
Black Spruce, 3-yr. s., 10 to 12 ins.	2.00	15.00
Cash, please, No C.O.D.		

JOHN ZELENKA,
R. 2, Box 179, Grand Haven, Mich.

EVERGREENS.

	Per 100
Colorado Juniper, tr., 12 to 15 ins.	\$10.00
Douglas Fir, s., 6 to 8 ins.	2.00
Black Hill Spruce, s., 2 to 4 ins.	2.50
Colorado Blue Spruce, s., 4 to 6 ins.	2.50
Oriental Arborvitae, s., 3 to 10 ins.	3.00
American Arborvitae, s., 4 to 6 ins.	2.00
Austrian Pine, s., 8 to 10 ins.	2.50
Colorado Blue Spruce, tr. x, 10 to 12 ins.	12.00
Norway Spruce, tr., 12 to 18 ins.	5.50
Japanese Spruce, 6 to 8 ins.	5.00

WESTFIELD EVERGREEN NURSERY,
Westfield, Wis.

Hemlock transplants, strong rooted. Write for prices. Twin Cedar Nursery, Williamsburg, Mass.

HARDY PLANTS

HARDY PERENNIAL PLANTS, FIELD-GROWN.

Physostegia Virginiana, Achillea The Pearl, Veronica Longifolia, Coreopsis Mayfield Giants, Myosotis Blue Compacta, 80c per 10, \$6.00 per 100. Write for trade list.

MONTARAY GARDENS,
917 Whittlesey, St. Joseph, Mich.

IRISES. One each of 100 varieties labeled, including Naxos, Rosy Wings, Beowulf, Indian Hills, Golden Hind and many other new and choice varieties all for \$7.50. 100 Grape Hyacinths blooming size for \$2.00. Lupine seed (Russell's), 75c per oz., \$10.00 per lb.

SMITH GARDENS, Clarkston, Wash.

Peonies: Tree and Herbaceous, best varieties. Oberlin Peony Gardens, Sinking Spring, Pa.

LINING-OUT STOCK

LINING-OUT STOCK.

We have them. You may need some. Look over our list carefully if you have received one; if not, send for one. We have a splendid stock of Oak seedlings in 10 different varieties, also a nice stock of Berberis Thunbergii, and a good many items of unusual interest not very plentiful. Orders are coming in rapidly and we advise your getting next to our list soon. Nurserymen will be handicapped this fall by shortage of labor and material and if we get our stock out of time we must have the orders as early as possible.

ATLANTIC NURSERIES, INC., Berlin, Md.

LINING-OUT STOCK.

Juniper grafts, from 2½-in. pots worked on Red Cedar. Ready April and May. Ask for assortment and prices.

NICK'S NURSERY, Anchorage, Ky.

SEEDS

NEMATODE-RESISTANT PEACH SEED.

U.S.D.A. Introductions from India and China. Shall and Yunnan 55883 and 55886. Harvesting now completed and orders being filled.

KIRKMAN NURSERIES,

P. O. Box 800,

Tracy, Cal.

SEEDS OFFERED

	Lb.	10 lbs.	100 lbs.
Rosa Canina (dog briar)	\$1.00	\$ 9.00	\$ 80.00
Pear, domestic	2.00	18.00	160.00
Quince Oblonga	2.00	18.00	160.00
Dogwood, pink	1.00	9.00	80.00
Canadian Hemlock	5.00	45.00	400.00
Cornus Canadensis	2.00	18.00	160.00

Many other varieties of seeds in smaller quantities.

J. H. BUSE, Seedling Grower, Leamington, Ont., Canada

Peach Pits, \$2.50 per bushel. Peach, Plum, Apricot, Apple, Pear, Cherry, Fig, Pecan, Walnut trees. Riverdale Nurseries, Riverdale, Ga.

CANADENSIS HEMLOCK SEED. 1942 crop, \$4.50 per lb. Ilex Verticillata, d b's 1942 crop, 50c per lb. postpaid. N. S. HAYDEN, R. 2, Gorham, Me.

SHRUBS and TREES

TREES and SHRUBS

	Per 100	Per 1000
Barberry Thunbergii, 24 to 30 ins.	\$10.00	\$ 80.00
(3-yr. field-grown), 30 to 36 ins.	15.00	100.00
Buddleia Charming, 2 to 3 ft.	12.00	100.00
Dogwood, White-flowering, 5 to 6 ft.	75.00	
Euonymus Americanus, 3 to 4 ft.	30.00	
Euonymus Americanus, 4 to 5 ft.	40.00	
Euonymus Europaeus, 5 to 6 ft.	50.00	
Forsythia Spectabilis, 15 to 24 ins.	10.00	80.00
Forsythia Spectabilis, 3 to 4 ft.	15.00	120.00
Forsythia Suspensa, 3 to 4 ft.	17.00	125.00
Forsythia Suspensa, 4 to 5 ft.	20.00	150.00
Hamamelis Vernalis, 2 to 3 ft.	20.00	175.00
(Winter-flowering Witch Hazel), 3 to 4 ft.	25.00	200.00
Lilac, common, 18 to 24 ins.	20.00	175.00
(White and Purple), 24 to 30 ins.	25.00	200.00
Lonicera Tatarica Rubra, 12 to 18 ins.	8.00	75.00
Lonicera Tatarica Rubra, 18 to 24 ins.	10.00	85.00
Lonicera Fragrantissima, 3 to 4 ft.	20.00	180.00
Prunus Tomentosa, 2 to 3 ft.	15.00	125.00
(Nanking Cherry), 3 to 4 ft.	17.50	150.00
Shepherdia Argentea (Buffalo Berry), 4 to 5 ft.	15.00	125.00
Sycamore, American, 8 to 10 ft.	75.00	
Tamarix Hispania, 3 to 4 ft.	15.00	100.00
Viburnum Americanum, Var. Weymouth, 3 to 4 ft.	25.00	
Viburnum Tomentosa, 3 to 4 ft.	20.00	175.00

HARDY ORNAMENTAL VINES.

Bittersweet, Oriental, 1-yr. field-grown	12.00	100.00
Clematis Paniculata, 1-yr. field-grown	12.00	100.00
Euonymus Carrierei, 1-yr. field-grown	10.00	75.00
Euonymus Coloratus, 1-yr. field-grown	10.00	85.00
2-yr. field-grown	15.00	120.00
3-yr. field-grown	20.00	175.00
Hall's Honey-suckle, 2-yr.	10.00	80.00

LINING-OUT STOCK.

Barberry Thunbergii, 2-yr. S., 12 to 15 ins.	1.50	12.00
15 to 18 ins.	2.00	15.00
Minor (Dwarf Box Barberry), 12 to 15 ins.	6.00	50.00
Boxwood, Hardy Df., 10 to 12 ins.	12.00	80.00
Hvy., 12 to 15 ins.	16.00	100.00
Cornus Mas, 2 to 3 ft.	10.00	75.00
Hamamelis Vernalis, 3-yr., 5 (Winter Fl. Witch Hazel), 12 to 15 ins.	6.00	50.00
15 to 18 ins.	9.00	75.00
Lonicera Maximowiczii (Triple Red Honeysuckle), 2 to 3 ft.	5.00	40.00

W. N. SCARFF'S SONS,
New Carlisle, Ohio.

LILACS

Our collection contains 90 per cent of the list published by the Association of Botanical Gardens as "the very finest."

1-yr.-old	\$0.25
1½ to 2 ft.	.50
2 to 3 ft.	.75
3 to 4 ft.	1.00
4 to 5 ft.	1.75

(Bushy plants.)
BAGATELLE NURSERY,
Huntington Station, L. I., N. Y.

Early-bearing bred-up budded and grafted paper-shell Pecan trees, Peach, Pears, Figs, Grapes, Plums, Apples, Strawberries, Youngberries, Boysenberries. New Crop Pecan Nuts. Catalogue free.

BASS PECAN CO., Lumberton, Mississippi.
WHITE FLOWERING DOGWOOD. A fine block of 500, 5 to 6 and 6 to 7 ft. Given space. Nursery-grown.

O. A. MAUEY & SON, Columbus, Ind.

ROSES

ROSES, 2-YEAR, FIELD-GROWN.

(Budded low on Multiflora Japonica.)

We ship the best. Acres of the finest Roses we have ever produced, grown on our own farms and shipped direct. Satisfaction guaranteed.

PRICES are on strictly well graded stock.
No. 1, 19c; No. 1½, 15c; No. 2, 11c.

American Beauty, Golden Dawn,
Antina, Golden Rapture,
Betty Upchurch, Joanna Hill,
Briarcliff, K. A. Victoria,
Caledonia, Pink Killarney,
Condens de Santiago, Lady Hillington,
Crusader, Los Angeles,
Dainty Bess, National Emblem,
Edith Nellie Perkins, Pres. Hoover,
Editor McFarland, Red and Pk. Radiance,
E. G. Hill, Salmon Radiance,
Etoile de Hollande, Syracuse,
Francis Scott Key, Tallman.

Write for complete list, or order direct.

VERMAY NURSERY CO., TYLER, TEX.

WANTED

WANTED.

Wholesale Quotations on Following Stock.

Sweet and Sour Cherry, one and two-yr., all grades.
Standard Pear, one and two-yr., all grades.
European and Japanese Plum, one and two-yr., all grades.
Budded Peach and Apricot, one-yr., all grades.
Small Fruit Plants of all kinds.

In quoting state approximate quantities available in each variety and grade.

Address No. 273, care American Nurseryman,
343 E. Dearborn St., Chicago 4, Ill.

WANTED.

200 lbs. Apple seed (state variety).
25 lbs. Rosa Multiflora, thornless.
50 lbs. Acer Platanoides and also other varieties of Acer.
5 lbs. Cydonia Japonica.
25 lbs. Ulmus Pumila.
100 lbs. Crataegus Oxyacantha.
And further smaller lots of tree seeds, shrub seeds, evergreen seeds. J. H. BUSE, Seedling Grower, Leamington, Ont., Canada.

WANTED.

Up to 100,000 Washington Asparagus, one-year. Quote in bulk, also in bundles of 25.

LAKE'S SHENANDOAH NURSERIES,
Shenandoah, Ia.

WANTED.

3000 to 3000 blueberry cuttings for next spring planting. State size, price and varieties.
BILMAR NURSERIES,
Pleasant Valley, Dutchess Co., N. Y.

WANTED—Hogenfritz opening planting plow. Kindly quote price and advise condition of this equipment.

HOLTON & HUNKEL CO.,
707 N. Milwaukee St., Milwaukee 1, Wis.

WANTED

30,000 Washington Asparagus, 2-year-old, and 30,000 Washington Asparagus, 1-year-old.
SHERMAN NURSERY CO.,
Charles City, Ia.

FOR SALE

FOR SALE—General nursery business, established 18 years in fourth largest city of Colorado, center of great irrigation district, soon to have big increase of water supply; capital required, \$18,000; future outlook very prosperous. Write owner, R. U. Williams, 1031 20th St., Greeley, Colo.

SUPPLIES

BOX LUMBER. \$40.00 per 1000. Order direct. Send us your requirements. Norway Maple, 1½-inch caliper, \$24.00 per 10. Swedish Maple, 1½-inch caliper, \$30.00 per 10.

POTTER NURSERIES, Huntington, W. Va.

GIBRALTAR Frost Covers pay for themselves. Most economical, long lasting, also ideal for wind-breaks. 6½ ft. wide, price, 30 ft., \$13.75; 100 ft., \$38.00; 150 ft., \$39.00. NEW AMSTERDAM CO., 122 Chambers St., New York 7, N. Y.

COTTONETTE Squares are best for baling. Saves time and twine. All sizes in stock. Write for prices. NEW AMSTERDAM CO., 122 Chambers St., New York 7, N. Y.

CONES

500 NEW CONES FOR \$2.50.
Sold in lots of not less than 2000 for \$10.00. Will not sell less at this price. Approximately 2½ to 1½ ins. Subject to prior sale. New Lobliolly Cones for wreaths, 3 to 4½x2½ ins., \$2.00 per 100. Slash Cones, new and shiny, 3 to 4 ins., \$2.00 per 100; 4 ins. and over, \$3.00 per 100. Slash is a wide cone. There will be a short while before Lobliolly and Slash are ready for shipment. Other Cones ready now. Assorted Cones, per bu., \$1.50. New, beautiful, perfectly shaped Cones, approximately 2½ to 1½x1½ ins., \$1.25 per 100, \$5.00 per 1000. New Cones, 2½ ins., to slightly over, \$1.50 per 100. Samples, 50c; larger boxes, \$1.00. Cash. Cones are scarce. Order early.
MARYLAND NURSERY, Edmonston, Md.

BOOKS

for Nurserymen

Book A. Illustrates in full color 235 standard nursery items, brief description, substantially bound. Price in small lots, 75c each.

Descriptive Nursery Catalogue

Nicely illustrated, 48 pages and cover. 18c each in small lots.

Correct Planting Methods

A pocket-size 48-page booklet. Very complete but concise information, well illustrated. Helpful in preventing claims for dead stock that cost nurserymen money. Sample, 10c. Write for discounts on quantities.

Will send sample copy of each of the above on receipt of \$1.00. Cash with order.

Made to Order

Catalogues, Folders, etc., with illustrations in full color or one color. Thousands of engravings available. Send your specifications or samples for estimate and suggestions.

A. B. MORSE COMPANY
ST. JOSEPH, MICHIGAN

PROTECT TREES AND SHRUBS AGAINST RABBITS

with COPPER SOAP

rodent repellent

Easily applied, economical, effective. One application lasts entire season. YOUR NURSERYMAN OR SEED DEALER HAS IT. Write for descriptive literature.

CASTLE CHEMICAL CO.
Castle Rock, Minn.

PROTECT Your Greenhouses

Canvas covers thrown over greenhouses protect glass and plants from damage by hail and wind. As windbreaks for growing plants, too, canvas is economical, durable, easily moved from place to place. Our nearest office invites your inquiries. No obligation.

C. R. DANIELS, INC.

Manufacturers of Everything of Canvas
NEW YORK CHICAGO LOS ANGELES
Boston Cleveland Newark
Buffalo Detroit Philadelphia
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Offices in Other Principal Cities

Write for FREE Catalog!



Nursery Spades, Knives and Pruning Shears, Budding and Grafting Supplies, Tree Surgery and Lawn Equipment.
96 page catalogue free-write,
A. M. LEONARD & SON
Piquette, Ohio

at Wichita, Kan., about the middle of October.

Paul Baker, formerly of Enid, Okla., and more recently in charge of the grounds of Hill Top Manor, a federal housing project at Wichita, Kan., has resigned and gone into the landscape business at Wichita.

Ross McCausland, Jr., son of Ross McCausland, seedsman and nurseryman, Wichita, Kan., is in training as an army pilot at San Antonio, Tex.

FEWER IN PENNSYLVANIA.

According to a report recently issued by the Pennsylvania state department of agriculture, bureau of plant industry, the number of nurseries registered for 1944 will be noticeably reduced. Thomas L. Guyton, director of the bureau, states that nearly 100 less nurseries will be in operation because of war conditions.

The announcement came after the bureau completed its annual inspection of nurseries September 30, issuing certificates to operators whose nursery stocks are free from dangerous insect pests and plant diseases. The bureau reported that there were ninety-two fewer applications for certificates for 1944 than for 1943; fifty-four fewer dealers in nursery stocks; eight fewer collectors of nursery stock; seventeen fewer out-of-state nurseries, but an increase of six in the number of out-of-state dealers.

The report indicates that the remaining nurseries will continue their contributions to the war effort through working longer hours and adding to the food supply.

E. F. R.

NEW PLANT PATENTS.

The following plant patents were issued last month, according to Rummler, Rummler & Davis, Chicago patent lawyers:

No. 601. Rose plant. R. L. Byrum, Richmond, Ind., assignor to Joseph H. Hill Co., Richmond, Ind. A new and distinct variety of rose plant of the polyantha class, characterized as to novelty by its habit of vigorous growth, with relatively large foliage; greater productivity of large flowers, growing on long stems, having more numerous petals, especially adapting it to cut flower as well as garden decoration purposes, and novel coloring of the flowers.

THE Jackson & Perkins Co., Newark, N. Y., has 600 acres devoted to essential food crops, including potatoes, beets, beans, soybeans and grain. At the firm's California nursery there are about 300 acres in tomatoes and another 300 acres in other food crops.

☐ NURSERY BURLAP

SQUARES and ROLLS ☐

RIGHT { Packing
Size
Price

Write for prices and samples.

L. ATKIN'S SONS
P. O. Box 167, ROCHESTER, N. Y.

LABELS FOR NURSERYMEN

THE
**BENJAMIN CHASE
COMPANY**
DERRY, N. H.

RAFFIA and RUBBER BUDDING STRIPS

FOR BUDDING and TYING

We can offer for immediate shipment CONGO RAFFIA and GOODRICH RUBBER STRIPS.

Send for Prices.

Thomas B. Meehan Co.
Dresher, Pa.

GENUINE MOSS PEAT

Hydraulic pressed bales and smaller resale packages. Sphagnum Moss, Cultivated Peat Humus.

Shipped from Northern plant at Floodwood, Minn., and Hanlontown, Iowa. Annual capacity 1,000 carloads.

Now booking for present and future deliveries.

Write or wire for quotations.

Colby Pioneer Peat Co., Inc.
Hanlontown, Iowa

Send For **BLUE BOOK**

Tools and All Supplies for Nurserymen and Tree Surgeons

AMERICAN FLORIST SUPPLY CO.
1335 W. Randolph St. CHICAGO 7

Large Selection—

Metal Wheelbarrows

With or without pneumatic tires

BERGEN FLORIST SUPPLIES
Phone: HAcK. 2-8397, 251 Hudson St.
HACKENSACK, N. J.

Japanese Yew (*Taxus*)**3-oz. can - \$1.00****1-lb. can - 4.00**

(One pound makes 160 to 1600 gallons of solution for transplanting.)

Write us today for our special proposition to nurserymen.

ESPECIALLY NOW!**IT IS IMPORTANT TO CUT DOWN TRANSPLANTING LOSSES AND TO LENGTHEN YOUR SEASON - - - -**

Nurserymen Are Finding That

Reg. U. S. Pat. Off.

TRANSPLANTONE


is invaluable today in helping to cut down operating costs and to maintain a high volume level.

By using TRANSPLANTONE on all plants when they are moved, you can reduce your losses to the very minimum—especially in unfavorable seasons.

Just soak the soil around the roots of the newly moved plant with TRANSPLANTONE solution. With bare-root plants, nurserymen are getting excellent results by soaking them in a barrel of TRANSPLANTONE solution overnight before planting.

Treat broad and narrow-leaf evergreens, deciduous trees and shrubs with TRANSPLANTONE solution for reducing loss and promoting strong, vigorous growth right through the season. The treatment will not interfere with proper hardening of the wood before winter.

AMERICAN CHEMICAL PAINT COMPANY
 Horticultural Division A-56

Ambler, Penna.

BOOKS FOR NURSERYMEN

The Modern Nursery, by Alex Laurie and L. C. Chadwick. Guide to propagation, culture and handling of plants. Discusses all phases of nursery management. 508 p. (1931)\$5.00

Nursery Sales and Management, by Nelson Coon. Buying, estimating, records, salesmanship, office routine, etc. 240 p. (1931)\$1.50

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